SCREENING SITE INVESTIGATION REPORT

JORDAN SIGN COMPANY
SAVANNAH, GEORGIA
GAD003293057

Gilda A. Knowles
Environmental Specialist
Georgia Environmental Protection Division
October 1988

Reviewed by: Marlin R. Hatchell Date: December 30, 1988

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JORDAN SIGN COMPANY

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EXECUTIVE SUMMARY

The Jordan Sign Company site is located at 1690 East President Street Extension in Savannah, Chatham County, Georgia 31404. There is no RCRA status listed on file for the facility.

The Jordan Sign Company site is believed to have been in operation prior to 1979 and is now inactive. The property was previously owned by Mr. Hoyt D. Jordan, P.O. Box 1201, Savannah, Georgia. When purchased in the early 1960's, the property was a low marshy area. Construction debris was used to fill the rear of the property. Dredge spoils were disposed of on the front of the property by the City of Savannah. In 1974, Mr. Jordan sold the property to Mr. Reed Dulany, President of Southern States Phosphate and Fertilizer Company, Savannah, Georgia.

This former landfill site is a 23.5-acre tract of land. The site is currently covered with a heavy growth of vegetation; the southwest corner of the site is used for an apiary. The topography of the rear of the property is irregular, indicative that filling was done in this area. A drainage ditch runs along the north and west perimeter of the site. The site drains to the south and into Kayton Canal. It is alleged that Hercules Co. disposed of resin waste at this location prior to 1979. Exact waste quantities are unknown. The physical state of the waste at the time of disposal is assumed to be of a liquid/sludge consistency.

The site is located in Chatham County, which lies within the Atlantic Coast Flatwoods Province. Horizontal sedimentary and carbonate rocks comprise the water-bearing units of concern in the Savannah area. Surficial sediments of Quaternary age form the Savannah area's surficial aquifer. The water table is approximately 5 feet below land surface at the site. The surficial unit is composed mainly of sand and is generally less than 80 feet thick in this area.

The sandy deposits of the surficial aquifer rest unconformably upon the Hawthorn Formation. The Hawthorn Formation is of Miocene age and is described as being composed of Fuller's earth, sandy silt, feldspathic sand and slightly dolomitic, sandy phosphatic, fossiliferous limestone. In the Savannah area, a thick section of green silt and clay contribute to the Hawthorn formation's confining properties. The Hawthorn Formation is approximately 170 feet thick in Savannah. Even though it is used as a source of water for private wells, it is more important as a confining bed. Underlying formations are collectively termed the principal artesian aquifer. The Lisbon Formation serves as the lower confining unit. Even though small, there is a hydrologic interconnection between the surficial and principal artesian aquifers.

According to a Preliminary Assessment Reassessment conducted by NUS Corporation, the distance to the nearest municipal well is 3500 ft. The population served by groundwater within a three-mile radius is 15,000.

This investigation was conducted because of the alleged disposal of industrial wastes at this site and the apparent hydrologic connection between the

surficial and principal artesian aquifers and their enclosures. Based on the results of this study, which indicates the release of toxic metals to groundwater and a potential threat via direct contact with hazardous constituents, Georgia EPD recommends further assessment at this site via a Listing Site Investigation.

1.0 INTRODUCTION

The Jordan Sign Company site is believed to have been in operation prior to 1979 and is now inactive. During the time of operation, the site is alleged to have been an industrial waste disposal site. The Hercules Company is alleged to have placed "resin waste" at this location prior to 1979. An investigation was conducted because of the reported hydrologic connection between the surficial and principal artesian aquifers.

2.0 SITE CHARACTERIZATION

The tract of land on which the Jordan Sign Company site is located was purchased by Mr. Hoyt D. Jordan, P. O. Box 1201, Savannah, Georgia, in the early 1960's. The property was a low, marshy area until it was filled with construction debris by the Porter Construction Company in the late 1960's and early 1970's. Most of the filling took place in the rear of the property. In 1974, Mr. Jordan sold the property to Mr. Reed Dulany, President of Southern States Phosphate and Fertilizer Company (Ref. 1). Mr. Dulany allowed the City of Savannah to dispose of dredge spoils on the front of the property (Ref. 1). There are no permits on file for this facility and it is not listed on the RCRA notifiers list. It is alleged that, prior to 1979, Hercules Co. disposed of resin waste at the site (Ref. 2,3).

The former landfill site is a 23.5-acre tract. The site is currently covered with a heavy growth of vegetation. The topography of the rear section of the property is irregular, which suggests that filling was done at the site. The site is inactive, except for the southwest corner which is used for an apiary. A drainage ditch runs along the north and west perimeter of the site. The site drains to the south and into the Kayton Canal (Ref. 1).

The Jordan Sign Co. site is located in Savannah, Chatham County, Georgia. The site is surrounded by commercial and light industrial properties (Ref. 2). It is located in a heavily populated area. The population distribution within one-, two-, three-, and four-mile radii of the site is 7232, 28,927, 65,085, and 144,634, respectively (Appendix A). There are schools located

within one mile of the site (Appendix A). There are also heavily populated residential areas in the immediate vicinity of the site (Appendix A). There are 1925 acres of prime farmland in Chatham County. Farm use is distributed as cropland (200 acres), pasture (100 acres), forest (1550 acres) and idle land (75 acres) (Ref. 4).

There are no drinking water intakes known to be located on the extended 15-mile surface water migration pathway (Appendix A). Surface runoff from the site drains to the south and enters the Kayton Canal (Ref. 1; Appendix A). Surface water also filters into the sandy surficial deposits and flows north into the Savannah River (Ref. 3). Year-round recreational fishing takes place on the Savannah River, as well as commercial fishing between the months of January and March (Ref. 5).

The climate of the district is characterized by mild to hot humid summers and variable winters, alternating between short periods of cold and mild to warm temperatures. The local climate is influenced by influxes of cold air from the north and warm winds from the Atlantic Ocean and Gulf of Mexico (Ref. 4). The average annual precipitation for the area is 45.75 inches (Ref. 3, 6). The mean annual lake evaporation for the area is 44.0 inches (Ref. 7). The annual net precipitation for the area is 1.75 inches (Ref. 7). The 1-year 24-hour rainfall for the area is 3.7 inches (Ref. 7).

Horizontal sedimentary and carbonate rocks comprise the water-bearing units of concern in the Savannah area. Surficial sediments of Quaternary age form the Savannah area's surficial aquifer (Ref. 3). The water table is approximately 5 feet below land surface at the Jordan Sign Co. site (Ref.

3, 8). This surficial unit is composed mainly of sand and is generally less than 80 feet thick in the Savannah area (Ref. 3). Ground water from the surficial aquifer is probably adequate for domestic use in some inland areas, but near the ocean and along tidal estuaries, brackish water is often encountered (Ref. 3, 9).

The sandy deposits of the surficial aquifer rest unconformably upon the Hawthorn Formation (Ref. 9). The Hawthorn Formation is of Miocene age and is described as being composed of Fuller's earth, sandy silt, feldspathic phosphatic sand, and slightly dolomitic, sandy, phosphatic, fossiliferous limestone (Ref. 3). In the Savannah area, a thick section of green silt and clay contributes to the Hawthorn Formation's confining properties (Ref. 3, 9). Thick sand zones and lenses of limestone produce moderately large volumes of water under artesian conditions (Ref. 3). The Hawthorn Formation is approximately 170 feet thick in Savannah. Even though it is used as a source of water for private wells, it is more important as a confining bed (Ref. 3).

The underlying formations of Miocene, Oligocene, and Eocene ages are collectively termed the principal artesian aquifer (Ref. 3, 9). In descending stratigraphic order, these formations are the Tampa limestone, undifferentiated rocks, the Ocala limestone, the Gosport sand, and the Lisbon Formation. The Lisbon Formation serves as the lower confining unit (Ref. 3). Yields in the principal artesian aquifer range from 200 gpm in the Tampa Limestone land up to 4200 gpm in the Ocala limestone (Ref. 3,9).

Large groundwater withdrawals (73 mgd) from the principal artesian aquifer

in Savannah have caused a cone of depression which laterally extends beyond the city (Ref. 8). This cone of depression has a very steep gradient, which results in a downward component in the surficial aquifer's movement in recharging the principal artesian aquifer (Ref. 3). Even though small, there is a hydrologic interconnection between the surficial and principal artesian aquifers (Ref. 3).

The Savannah Municipal System supplies water for the city. This water is obtained from the principal artesian aquifer. Industries in the area are supplied their water by the Savannah Industrial and Development Water Department, which obtains its water from Abercorn Creek, approximately 10 miles upstream from Savannah (Ref. 3, 10). The closest municipal well is 3500 feet from the site and is 300 feet deep. The closest private well is approximately 100 ft. deep and 4 miles west of the site.

3.0 TARGET ANALYSIS

There are no populations affected via surface water intakes within 15.0 miles downstream of the Jordan Sign Company site. There are a total of 16 wells known to be within a 4-mile radius of the site (Ref 3, 10). The equivalent population for the well count is 144,634 or greater. Air within the 4.0 mile radius was not monitored, and full-face respirators were not needed during sampling on- or off-site.

3.0 TARGET ANALYSIS
SUMMARY

PATHWAYS	POTENTIALLY AFFECTED POPULATIONS
Surface Water (15 miles)	None. There are no intakes located on the extended downstream 15-mile migration pathway.
Ground Water (4 miles)	>144,634 (16 wells = 14 City of Savannah wells, 2 private wells).
Air (4 miles)	There were no air emission sources on-site. There are sensitive environments (coastal wetlands) within a 4-mile radius of the site.
On-Site Exposure (1-mile)	Yes. The total population within 1-mile radius of the site is 7,232.

4.0 FIELD INVESTIGATION

A total of two samples were collected by Georgia EPD on August 25, 1988 to identify possible release of wastes from the facility (Ref. 1). A background groundwater sample (JSGW-1) was collected from a drilled well on the Savannah Country Club, located south of the site. An on-site groundwater sample (JSGW-2) was collected from a shallow boring (1.5 feet below ground surface) on the north part of the site (Ref. 1).

Based on laboratory analytical data (see Summary Table; Appendix C), there are observed releases to groundwater from on-site wastes involving toxic metals. Arsenic (675x), barium (110x), cadmium (72x), chromium (170x), nickel (27x), and lead (1280x) were found in significantly higher concentrations in groundwater on-site than in the background sample (Ref.11). All toxic metals were found to be above the Maximium Contaminant Level (MCL) as set forth in the Georgia Rules for Safe Drinking Water (Ref. 12). There were no volatile organic compounds detected in either of the groundwater samples (Ref. 11).

All sample collection and laboratory analyses were conducted in accordance with quality control/quality assurance procedures established by EPA (Ref. 13).

SUMMARY TABLE

Laboratory Analysis

Groundwater (ug/L)

Sample	Arsenic	Barium	Cadmium	Chromium	Nickel	Lead
JSGW-1 (background)	<40	<10	<10	<10	<20	<25
JSGW-2 (on-site)	27,000	1100	720	1700	540	32,000

$\frac{27000}{40} = 675\times$ $\frac{1100}{10} = 110\times$ $\frac{720}{10} = 72\times$ $170\times$ $27\times$ $1280\times$

5.0 SUMMARY

Laboratory analyses of samples collected indicate that there are releases of toxic metals to groundwater from waste materials buried in this former landfill. Concentrations of these contaminants were significantly higher in on-site groundwater that in a background sample.

There are no intakes located on the extended downstream 15-mile migration pathway. The site is easily accessible. There are no fences or security present at the site.

A total of 16 wells, including 14 City of Savannah municipal wells, were observed within a four-mile radius of the site. The equivalent groundwater target population is 144,643 or greater.

Based on the findings of this investigation, Georgia EPD recommends this site for a Listing Site Investigation because of the release to groundwater and the potential threat of exposure via direct contact.

REFERENCES

1. Georgia Department of Natural Resources, Environmental Protection Division, 8-24-88. Trip Report of Sampling Site Inspection by Charles P. Evans (Jordan Sign Co.).

2. Kaduck, Jennifer. Eckhardt Preliminary Assessment, December 12, 1979. Georgia Department of Natural Resources, Environmental Protection Division.

3. Riley, Walter, NUS Corporation. Preliminary Assessment Reassessment, May 3, 1988. TDD No. F4-8803-52 (Jordan Sign Company, Savannah, Georgia).

4. Hewell, Crawford H., 1981. Resource Conservation Program and Action Plan. Coastal Soil and Water Conservation District, State Soil and Water Conservation Committee Field Office, Statesboro, Georgia.

5. McKeown, John, NUS Corporation. Preliminary Assessment Reassessment, May 23, 1988. TDD No. F4-8803-55 (Rheem Manufacturing Company, Savannah, Georgia).

6. United States Department of Agriculture, Soil Conservation Service, 1974. Soil Survey of Bryan and Chatham Counties, Georgia.

7. National Oil and Hazardous Substances Contingency Plan, Appendix A, 40 CFR Part 300, 47 Federal Register 31219.

8. Clark, J.S., et al., 1987. Ground-Water Data for Georgia 1986. U.S. Geological Survey. Open-File Report 87-376, 177 p.

9. Counts, H.B., and E. Donsky, 1963. Salt-Water Encroachment Geology and Ground-Water Resources of Savannah Area - Georgia and South Carolina, U. S. Geological Survey Water Supply Paper 1611, 100 p.

10. NUS Corporation, 1988. Field Notes, Log Book #F4-743. Jordan Sign Company.

11. Georgia Department of Natural Resources, Environmental Protection Division 10-18-88. Laboratory Analysis Report. Jordan Sign Company, Savannah, Georgia.

12. Georgia Department of Natural Resources, Environmental Protection Division. Rules for Safe Drinking Water, Chapter 391-3-5, Revised August 1983.

13. United States Environmental Protection Agency, 1982. Test Methods for Evaluating Solid Waste. Publication No. SW-846.

REFERENCES

Georgia Department of Natural Resources
205 Butler Street, S.E., Floyd Towers East, Atlanta, Georgia 30334
J. Leonard Ledbetter, Commissioner
Harold F. Reheis, Assistant Director
Environmental Protection Division

TRIP REPORT

September 12, 1988

SITE NAME AND LOCATION:	Jordan Sign Company 1690 East President Street Extension Savannah, Georgia 31404
EPA ID NUMBER:	GAD003293057
COUNTY:	Chatham
TRIP BY:	Charles P. Evans CPE Environmental Specialist Site Investigation Program
ACCOMPANIED BY:	Marlin Gottschalk Unit Coordinator Site Investigation Program
DATE AND TIME OF INVESTIGATION:	August 24, 1988 3:30 p.m. August 25, 1988 11:30 p.m.
OFFICIALS CONTACTED:	Gary Plumly Chatham - Savannah Metropolitan Area Planning Commission 2 East Bay Street Savannah, Georgia 31404 912/236-9523 Chris McDougal Maintenance Supervisor Savannah Country Club P.O. Box 5336 Station B Savannah, Georgia 31404 912/236-9342 Hoyt Jordan Jordan Sign Company 1690 East President St. Ext. Savannah, Georgia 31404 912/234-4493 Reed Dulany Southern States Phosphate and Fertilizer Company P.O. Box 546 Savannah, Georgia 31498 912/232-1101

REFERENCE:

Preliminary Assessment Reassessment:
NUS Corporation
Jordan Sign Company
1690 East President St. Ext.
Savannah, Georgia 31404

COMMENTS:

On August 24, 1988, we visited the Chatham-Savannah Metropolitan Planning Commission, 2 East Bay Street, Savannah, Georgia 31402 and examined aerial photographs of the vicinity of the study site. The planning commission had aerial photographs of 1985, 1977 and 1970 overflights of the area. There are no indications of any landfilling activities on the 1985 and 1977 photographs. However, the 1970 photo indicated disposal on a parcel of property to the northwest of Jordan Sign Company.

We visited the Chatham County Tax Assessor's Office and discovered that the subject property had been sold to Southern States Phosphate and Fertilizer Company in 1974 by Mr. Hoyt Jordan, owner of Jordan Sign Company.

On August 25, 1988, we proceeded to Jordan Sign Company and discussed the history of waste disposal on this property with Mr. Hoyt Jordan. Mr. Jordan said that he had purchased the property in the early 1960s. The property at that time was a low, marshy area. He and Mr. Bill Porter (deceased) of Porter Construction Company filled the area with construction debris. Mr. Jordan said that no industrial waste was disposed of on the property. Mr. Jordan stated that he sold the property to Mr. Reed Dulany, President of Southern States Phosphate and Fertilizer Company, in 1974.

We talked to Mr. Dulany of Southern States Phosphate and Fertilizer Company. He said that he recalled the filling of the area and the fill material was construction debris. Mr. Dulany had no knowledge of any disposal of industrial waste on the property. Mr. Dulany said that most of the filling had occurred on the rear (north side) of the property. However, he had allowed the City of Savannah to dispose of dredge spoils on the front (south side) of the property. This statement agrees with the 1970 aerial photograph of the area. Mr. Dulany granted access to obtain samples on the property.

The former landfill site is a 23.5 acre tract of land. The site is covered with a heavy growth of vegetation. The topography of the rear of the property is irregular which suggests filling in this area. The site is currently unused, except for the southwest corner which is used for an apiary. A drainage ditch runs along the rear and west perimeter of the site. The site drains to the south and into the Kayton Canal. I made a reconnaissance of a woodline on the rear of the property. I observed the remains of twelve drums in this area. The drums were in a deteriorated condition or almost completely buried.

I obtained two groundwater samples in the area. One sample (JSGW-1) was collected from a drilled well on the Savannah Country Club, located about 1700 feet from the southern bounday of the site. According to Mr. Chris McDougal, maintenance supervisor with the Savannah Golf Course, the well is about 360 feet deep and 200 people drink its water on a daily basis. I collected the other groundwater sample (JSGW-2) from a shallow boring on the north part of the site. The water level in the area of JSGW-2 was 1.5 feet below ground surface.

No surface water samples were obtained, since interference from other sources of contamination is expected to be high. The ditch surrounding the site receives drainage from other industries in the area. The Savannah wastewater treatment plant discharges their treated effluent into the Kayton Canal about 170 meters downstream of the former landfill.

CONCLUSIONS:

Pending laboratory data.

RECOMMENDATIONS AND FOLLOW-UP REQUIRED:

PHOTOGRAPHS: Four Polaroids

NUMBER OF WASTE/ENVIRONMENTAL SAMPLES TAKEN: Two environmental samples

REVIEWED BY: Marlin A. Gothelf **DATE:** September 20, 1988

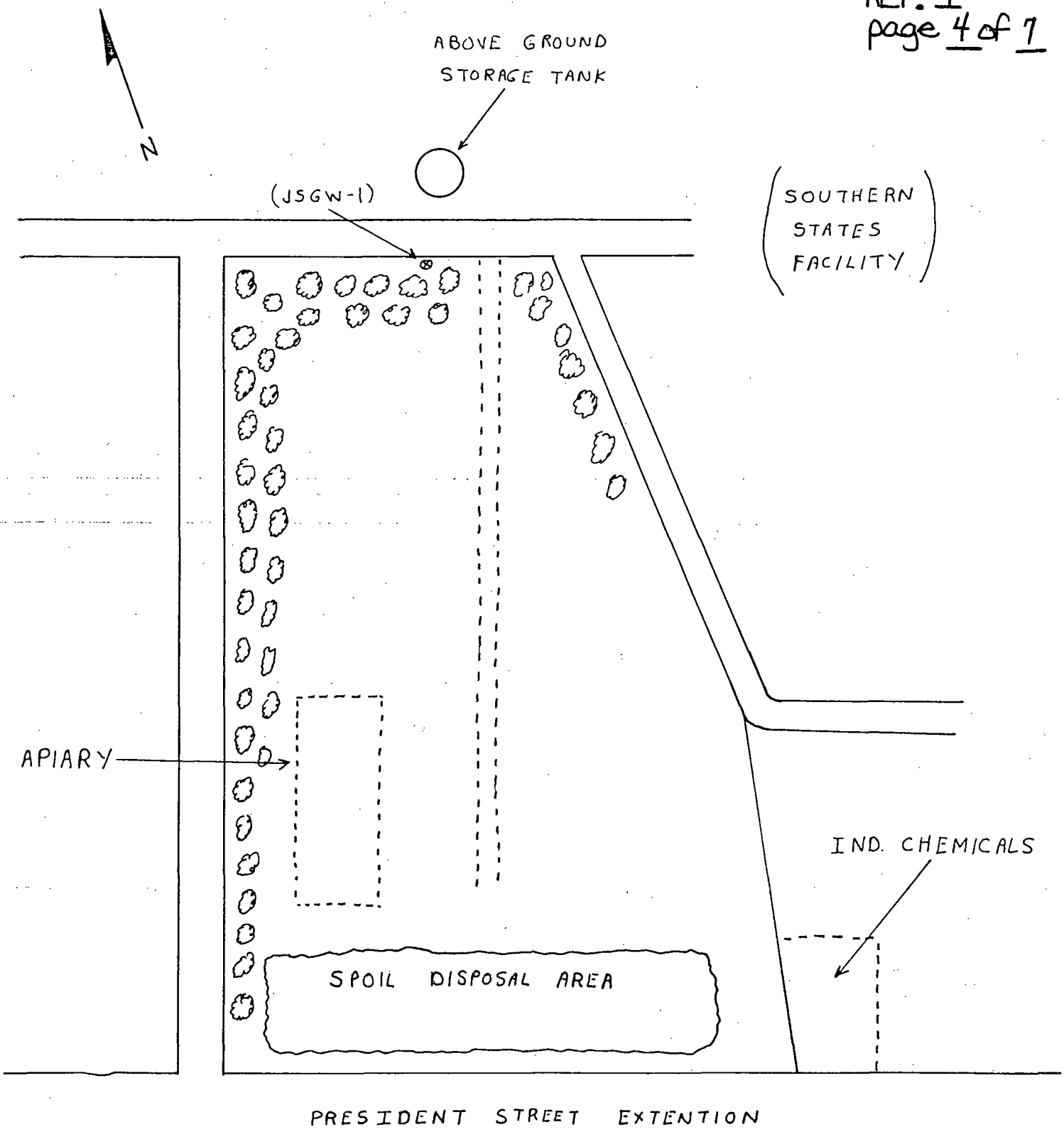
ATTACHMENTS: Site Location Map
Site Sketch
Photographs (4)

CPE:tme/1/32

File: Jordan Sign Company (GAD003293057) - Chatham County

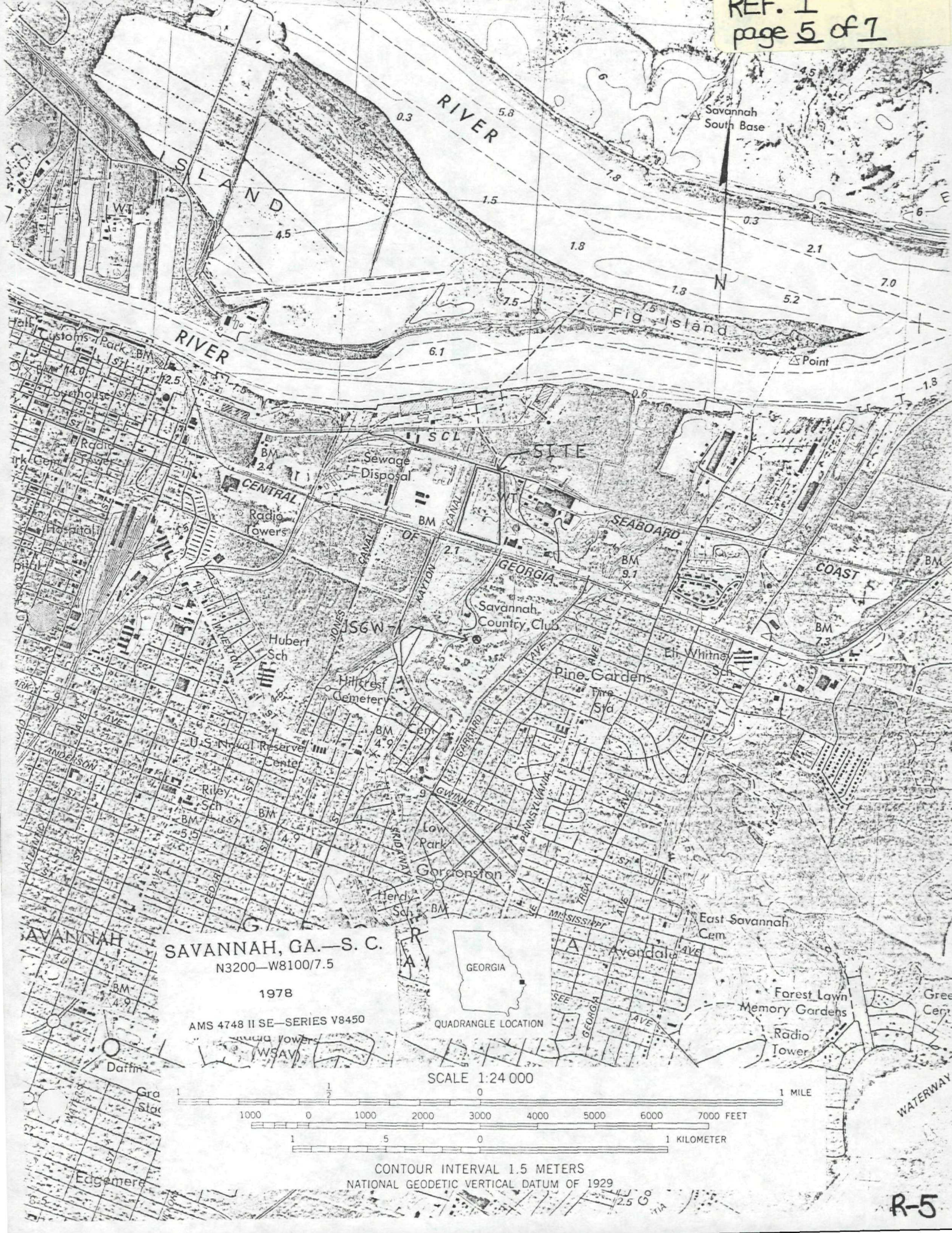
SIP - 08

4/87R



JORDAN SIGN COMPANY SITE
GAD003293057
(SITE SKETCH)

1" = 400'


RIVER
ISLAND
Savannah South Base
RIVER
Fig Island
Point
Customs Park
Courthouse
Radio Tower
Hospital
SCL
SITE
Sewage Disposal
CENTRAL
Radio Towers
CANAL
SEABOARD
COAST
GEORGIA
Savannah Country Club
JSGW
Hubert Sch
Hillcrest Cemetery
Pine Gardens
Fire Sta
Eli Whitney Sch
U S Naval Reserve Center
Riley Sch
Low Park
Gorrionston
Herdy Sch
East Savannah Cem
Avondale
Forest Lawn Memory Gardens
Radio Tower
WSAV
Daffin
Edgemere
SAVANNAH
GEORGIA
SAVANNAH, GA.—S. C.
N3200—W8100/7.5
1978
AMS 4748 II SE—SERIES V8450
QUADRANGLE LOCATION
SCALE 1:24 000
1 MILE
1000 FEET
1 KILOMETER
CONTOUR INTERVAL 1.5 METERS
NATIONAL GEODETIC VERTICAL DATUM OF 1929

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County Name CHATHAM
Picture No. 1 of 4
Site Name JORDAN SIGN CO.
Date 8/25/88 Weather CLEAR
Direction Facing WEST
Photographer C. EVANS
Program SITE INVESTIGATION
Explanation DRUM FOUND IN WOODLINE.
Other

County Name CHATHAM
Picture No. 2 of 4
Site Name JORDAN SIGN CO.
Date 8/25/88 Weather CLEAR
Direction Facing WEST
Photographer C. EVANS
Program SITE INVESTIGATION
Explanation REMAINS OF CRUSHED DRUM.
Other

County Name CHATHAM
Picture No. 3 of 4
Site Name JORDAN SIGN CO.
Date 8/25/88 Weather CLEAR
Direction Facing WEST
Photographer C. EVANS
Program SITE INVESTIGATION
Explanation REMAINS of PARTIALLY BURIE DRUM.

Other

County Name CHATHAM
Picture No. 4 of 4
Site Name JORDAN SIGN CO.
Date 8/25/88 Weather CLEAR
Direction Facing WEST
Photographer C. EVANS
Program SITE INVESTIGATION
Explanation PARTIALLY BURIED DRUM.

Other

EPA

POTENTIAL HAZARDOUS WASTE SITE
IDENTIFICATION AND PRELIMINARY ASSESSMENT

REGION: 4

SITE NUMBER (assigned by HQ): 629 1900

NOTE: This form is completed for each potential hazardous waste site to help set priorities for site inspection. The information submitted on this form is based on available records and may be updated on subsequent forms as a result of additional inquiries and on-site inspections.

GENERAL INSTRUCTIONS: Complete Sections I and III through X as completely as possible before Section II *(Preliminary Assessment)*. File this form in the Regional Hazardous Waste Log File and submit a copy to: U.S. Environmental Protection Agency; Site Tracking System; Hazardous Waste Enforcement Task Force *(EN-335)*; 401 M St., SW; Washington, DC 20460.

I. SITE IDENTIFICATION

A. SITE NAME: Jordon Sign Company (Hercules disposal site)

B. STREET *(or other identifier)*: Corner of President & Randolph Streets

C. CITY: Savannah

D. STATE: GA

E. ZIP CODE: 31402

F. COUNTY NAME: Chatham

G. OWNER/OPERATOR *(if known)*

1. NAME: Unknown presently (Hercules old disposal site)

2. TELEPHONE NUMBER: -

H. TYPE OF OWNERSHIP

☐ 1. FEDERAL ☐ 2. STATE ☐ 3. COUNTY ☐ 4. MUNICIPAL ☐ 5. PRIVATE ☒ 6. UNKNOWN

I. SITE DESCRIPTION

Warehouse area at present. Hercules placed resin waste at this location at an unknown time. Site covered with buildings, vegetation and railroad tracks.

J. HOW IDENTIFIED *(i.e., citizen's complaints, OSHA citations, etc.)*: Eckhardt report

K. DATE IDENTIFIED *(mo., day, & yr.)*: 12-79

L. PRINCIPAL STATE CONTACT

1. NAME: Moses N. McCall

2. TELEPHONE NUMBER: 404/656-2833

II. PRELIMINARY ASSESSMENT *(complete this section last)*

A. APPARENT SERIOUSNESS OF PROBLEM

☐ 1. HIGH ☐ 2. MEDIUM ☐ 3. LOW ☒ 4. NONE ☐ 5. UNKNOWN

B. RECOMMENDATION

☒ 1. NO ACTION NEEDED *(no hazard)*

☐ 2. IMMEDIATE SITE INSPECTION NEEDED
a. TENTATIVELY SCHEDULED FOR: _____
b. WILL BE PERFORMED BY: _____

☐ 3. SITE INSPECTION NEEDED
a. TENTATIVELY SCHEDULED FOR: _____
b. WILL BE PERFORMED BY: _____

☐ 4. SITE INSPECTION NEEDED *(low priority)*

C. PREPARER INFORMATION

1. NAME: Jennifer Kaduck

2. TELEPHONE NUMBER: 656-2833

3. DATE *(mo., day, & yr.)*: 12/11/79

III. SITE INFORMATION

A. SITE STATUS

☐ 1. ACTIVE *(Those industrial or municipal sites which are being used for waste treatment, storage, or disposal on a continuing basis, even if infrequently.)*

☒ 2. INACTIVE *(Those sites which no longer receive wastes.)*

☐ 3. OTHER *(specify)*: _____ *(Those sites that include such incidents like "midnight dumping" where no regular or continuing use of the site for waste disposal has occurred.)*

B. IS GENERATOR ON SITE?

☒ 1. NO ☐ 2. YES *(specify generator's four-digit SIC Code)*: _____

C. AREA OF SITE *(in acres)*: Unknown

D. IF APPARENT SERIOUSNESS OF SITE IS HIGH, SPECIFY COORDINATES
1. LATITUDE *(deg.-min.-sec.)*:
2. LONGITUDE *(deg.-min.-sec.)*:

E. ARE THERE BUILDINGS ON THE SITE?

☐ 1. NO ☒ 2. YES *(specify)*: Warehouse

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Continue On Reverse

IV. CHARACTERIZATION OF SITE ACTIVITY

Indicate the major site activity(ies) and details relating to each activity by marking 'X' in the appropriate boxes.

A. TRANSPORTER	B. STORER	C. TREATER	D. DISPOSER
1. RAIL	1. PILE	1. FILTRATION	1. LANDFILL
2. SHIP	2. SURFACE IMPOUNDMENT	2. INCINERATION	2. LANDFARM
3. BARGE	3. DRUMS	3. VOLUME REDUCTION	X 3. OPEN DUMP
X 4. TRUCK	4. TANK, ABOVE GROUND	4. RECYCLING/RECOVERY	4. SURFACE IMPOUNDMENT
5. PIPELINE	5. TANK, BELOW GROUND	5. CHEM./PHYS. TREATMENT	5. MIDNIGHT DUMPING
6. OTHER (specify):	6. OTHER (specify):	6. BIOLOGICAL TREATMENT	6. INCINERATION
		7. WASTE OIL REPROCESSING	7. UNDERGROUND INJECTION
		8. SOLVENT RECOVERY	8. OTHER (specify): probably covered over with construction activity
		9. OTHER (specify):	

E. SPECIFY DETAILS OF SITE ACTIVITIES AS NEEDED

No waste visually observed.

V. WASTE RELATED INFORMATION

A. WASTE TYPE

X 1 UNKNOWN 2. LIQUID X 3. SOLID X 4. SLUDGE 5. GAS

B. WASTE CHARACTERISTICS

X 1. UNKNOWN 2. CORROSIVE 3. IGNITABLE 4. RADIOACTIVE 5 HIGHLY VOLATILE
6. TOXIC 7 REACTIVE 8. INERT 9 FLAMMABLE

X 10. OTHER (specify): resin wastes generally accepted as non-hazardous

C. WASTE CATEGORIES

1. Are records of wastes available? Specify items such as manifests, inventories, etc. below.

No

2. Estimate the amount (specify unit of measure) of waste by category; mark 'X' to indicate which wastes are present.

a. SLUDGE	b. OIL	c. SOLVENTS	d. CHEMICALS	e. SOLIDS	f. OTHER
AMOUNT	AMOUNT	AMOUNT	AMOUNT	AMOUNT	AMOUNT
UNIT OF MEASURE	UNIT OF MEASURE: UNKNOWN	UNIT OF MEASURE	UNIT OF MEASURE	UNIT OF MEASURE	UNIT OF MEASURE
(1) PAINT, PIGMENTS	X (1) OILY WASTES	X (1) HALOGENATED SOLVENTS	X (1) ACIDS	X (1) FLYASH	X (1) LABORATORY PHARMACEUT.
(2) METALS SLUDGES	(2) OTHER (specify):	(2) NON-HALOGNTD. SOLVENTS	(2) PICKLING LIQUORS	(2) ASBESTOS	(2) HOSPITAL
(3) POTW		(3) OTHER (specify):	(3) CAUSTICS	(3) MILLING/ MINE TAILINGS	(3) RADIOACTIVE
(4) ALUMINUM SLUDGE			(4) PESTICIDES	(4) FERROUS SMLTG. WASTES	(4) MUNICIPAL
(5) OTHER (specify):			(5) DYES/INKS	(5) NON-FERROUS SMLTG. WASTES	(5) OTHER (specify):
			(6) CYANIDE	(6) OTHER (specify):	
			(7) PHENOLS		
			(8) HALOGENS		
			(9) PCB		
			(10) METALS		
			(11) OTHER (specify)		

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Continued From Page 2

V. WASTE RELATED INFORMATION (continued)

3. LIST SUBSTANCES OF GREATEST CONCERN WHICH MAY BE ON THE SITE (place in descending order of hazard).

Unknown

4. ADDITIONAL COMMENTS OR NARRATIVE DESCRIPTION OF SITUATION KNOWN OR REPORTED TO EXIST AT THE SITE.

none

VI. HAZARD DESCRIPTION

A. TYPE OF HAZARD	B. POTENTIAL HAZARD (mark 'X')	C. ALLEGED INCIDENT (mark 'X')	D. DATE OF INCIDENT (mo., day, yr.)	E. REMARKS
1. NO HAZARD				
2. HUMAN HEALTH				
3. NON-WORKER INJURY/EXPOSURE				
4. WORKER INJURY				
5. CONTAMINATION OF WATER SUPPLY				
6. CONTAMINATION OF FOOD CHAIN				
7. CONTAMINATION OF GROUND WATER				
8. CONTAMINATION OF SURFACE WATER				
9. DAMAGE TO FLORA/FAUNA	Unknown			Most likely only non-hazardous wastes from resin processes were placed in this site. Was probably a local industrial dumpsite that received other unknown waste types. Presently inactive.
10. FISH KILL				
11. CONTAMINATION OF AIR				
12. NOTICEABLE ODORS				
13. CONTAMINATION OF SOIL				
14. PROPERTY DAMAGE				
15. FIRE OR EXPLOSION				
16. SPILLS/LEAKING CONTAINERS/ RUNOFF/STANDING LIQUIDS				
17. SEWER, STORM DRAIN PROBLEMS				
18. EROSION PROBLEMS				
19. INADEQUATE SECURITY				
20. INCOMPATIBLE WASTES				
21. MIDNIGHT DUMPING				
22. OTHER (specify):				

R-10

Continued From Front

VII. PERMIT INFORMATION

A. INDICATE ALL APPLICABLE PERMITS HELD BY THE SITE.

☐ 1. NPDES PERMIT ☐ 2. SPCC PLAN ☐ 3. STATE PERMIT (specify): _____
☐ 4. AIR PERMITS ☐ 5. LOCAL PERMIT ☐ 6. RCRA TRANSPORTER
☐ 7 RCRA STORER ☐ 8. RCRA TREATER ☐ 9 RCRA DISPOSER
☐ 10. OTHER (specify): None

B. IN COMPLIANCE?

☐ 1. YES ☐ 2. NO ☒ 3. UNKNOWN

4. WITH RESPECT TO (list regulation name & number): Rules & Regs for Solid Waste Mgt. 391-3-4

VIII. PAST REGULATORY ACTIONS

☒ A. NONE ☐ B. YES (summarize below)

IX. INSPECTION ACTIVITY (past or on-going)

☐ A NONE ☒ B. YES (complete items 1,2,3, & 4 below)

1. TYPE OF ACTIVITY	2 DATE OF PAST ACTION (mo., day, & yr.)	3 PERFORMED BY: (EPA/State)	4. DESCRIPTION
Inspection	12/11/79	State	Visual observation

X. REMEDIAL ACTIVITY (past or on-going)

☒ A. NONE ☐ B. YES (complete items 1, 2, 3, & 4 below)

1. TYPE OF ACTIVITY	2. DATE OF PAST ACTION (mo., day, & yr.)	3. PERFORMED BY: (EPA/State)	4. DESCRIPTION

NOTE: Based on the information in Sections III through X, fill out the Preliminary Assessment (Section II) information on the first page of this form.

R-11

NUS CORPORATION
327 LAKESIDE PARKWAY
SUITE 614
TUCKER, GEORGIA 30084
404-938-7710

REF. 3
page 1 of 16

C-586-4-8-89

May 3, 1988

Mr. Robert Jourdan
Site Investigation and Support Branch
Waste Management Division
Environmental Protection Agency
345 Courtland Street, N.E.
Atlanta, Georgia 30365

Date: _____
Site Disposition: _____
EPA Project Manager: _____

Subject: Preliminary Reassessment
Jordan Sign Company
Savannah, Stephens County, Georgia
EPA ID No. GA000001900
TDD No. F4-8803-52

Dear Mr. Jourdan:

FIT 4 conducted a Preliminary Reassessment of Jordan Sign Company, Savannah, Georgia. The assessment included review of EPA and state file material, completion of a target survey, and an offsite reconnaissance of the facility and the surrounding areas.

Jordan Sign Company is located at the corner of President and Randolph Streets, on what is alleged to have been an industrial disposal site. Little detailed information is available regarding this site. It apparently consisted of a landfill utilized by local industries for a variety of unknown industrial wastes. Hercules is alleged to have placed "resin waste" at this location sometime prior to 1979. The exact size and extent of the landfill is unknown and it may extend well beyond the confines of the Jordan Sign Company property (Ref. 1) The property is surrounded by commercial and light industrial properties (Ref. 1).

The Jordan Sign Co. facility is located in Savannah, Chatham County, Georgia. The climate is characterized by mild temperatures and abundant rainfall (Ref. 2). The average annual precipitation is 45.75 inches, and the average annual temperature is 66.4°F (Ref. 2).

Horizontal sedimentary and carbonate rocks comprise the water bearing units of concern in the Savannah area. Surficial sediments of Quaternary age form the Savannah area's surficial aquifer (Ref. 3). The water table is approximately 5 feet below land surface at the Jordan Sign Co. facility (Ref. 4). This surficial unit is composed mainly of sand and is generally less than 80 feet thick in the Savannah area (Ref. 5). Groundwater from the surficial aquifer is probably adequate for domestic use in some inland areas, but near the ocean and along tidal estuaries brackish water is often encountered (Ref. 2).

The sandy deposits of the surficial aquifer rest unconformably upon the Hawthorne Formation (Ref. 2). The Hawthorne Formation is of Miocene age and is described as being composed of Fuller's earth, sandy silt, feldspathic phosphatic sand, and slightly dolomitic sandy phosphate fossiliferous limestone (Ref. 3). In the Savannah area a thick section of green silt and clay contribute to the Hawthorne formation's confining properties (Ref. 2).

Thick sand zones and lenses of limestone produce moderately large volumes of water under artesian conditions (Refs. 2,5). The Hawthorne Formation is approximately 170 feet thick in Savannah, and even though it is used as a source of water for private wells, it is more important as a confining bed (Refs. 2,5). The underlying formations of Miocene, Oligocene, and Eocene ages are collectively termed the principal artesian aquifer (Ref. 2) In descending stratigraphic order these formations are the Tampa limestone , undifferentiated rocks, the Ocala limestone, the Gosport Sand, and the Lisbon Formation. The Lisbon Formation serves as the lower confining unit (Ref. 2). Yields in the principal artesian aquifer range from 200 gpm in the Tampa Limestone, up to 4200 gpm in the Ocala limestone (Ref. 2).

Large groundwater withdrawals, 73 mgd, from the principal artesian aquifer in Savannah have caused a cone of depression which laterally extends beyond the city (Ref. 4). This cone of depression has a very steep gradient which results in a downward component in the surficial aquifer's movement and in recharge from above the cone of depression (Ref. 5). Although this hydrologic connection between the surficial aquifer and the principal artesian aquifer is very small, recharging the principal artesian aquifer by 0.2 inches to 6.5 inches annually, there is a hydrologic interconnection (Refs. 5,6). This also hydrologically connects the scattered artesian aquifers within the Hawthorne Formation with both the surficial aquifer and the principal artesian aquifer. Surface water at the Jordan Sign Company filters into the sandy surficial deposits and runoff flows north into the Savannah River.

Water for the city is provided by the Savannah Municipal System. The Savannah Municipal System obtains its water from the principal artesian aquifer. The water used by industries is supplied by the Savannah Industrial and Development Water Department which obtains its water from Abercorn Creek, approximately 10 miles upstream form Savannah. They supply almost all of the industries along the Savannah River (Ref. 7). The closest municipal well is 3500 ft. from the site. This well is 300 feet deep. The closest private well is approximately 100 feet deep and is 4 miles west of the site.

Based on the apparent hydraulic connection between the surficial and principal aretesian aquifers and the enclosures, FIT recommends that a site screening investigation be conducted on a medium priority basis.

Very truly yours,

Walter Riley Jr.

Walter Riley
Chemist

Approved

R-13

WR/dw

cc: Mario Villamarzo

REFERENCES

1. EPA file material, Preliminary Assessment Form, December 12, 1979, Jennifer Kaduck. Georgia Department of Natural Resources, Environmental Protection Division.

2. Counts, H.B., and Donsky, E., 1963. Salt-water Encroachment Geology and Ground-water Resources of savannah Area Georgia and South Carolina. U.S. Geological Survey Water-Supply Paper 1611. 100p.

3. Krause, R.E., Matthews, S.E., and Gill, H.E., 1984. Evaluation of the Groundwater Resources of Coastal Georgia. Preliminary Report on the Data Available as of July 1983, Georgia Department of Natural Resources Environmental Protection Division. Georgia Geologic Survey in cooperation with the U.S. Geological Survey. Information Circular 62. 55 p.

4. Clarke, J.S., and others, 1987. Ground-water Data for Georgia 1986, U.S. Geological Survey Open-File Report 87-376. 177p.

5. Randolph, R.B., 1988. Communication between Robert B. Randolph, Hydrologist with the U.S. Geological Survey, and John Jenkins, Geologist with the NUS Corporation.

6. Randolph,R.B., and Krause, R.E., 1984. Analysis of the Effects of Proposed Pumping from the Principal Artesian Aquifer, Savannah, Georgia Area. U.S. Geological Survey prepared in cooperation with the U.S. Army Corps of Engineers. Water-Resources Investigations Report 84-4064. 26p.

7. NUS Corporation, 1988. Field Notes, 1988 Log Book #F4-743. Jordan Sign Company.

RECONNAISSANCE CHECKLIST FOR HRS2 CONCERNS

Instructions: Obtain as much "up front" information as possible prior to conducting fieldwork. Complete the form in as much detail as you can, providing attachments as necessary. Cite the source for all information obtained.

Site name: Jordan Sign Co.
City, County, State: Savannah, Chatham County, Georgia
EPA ID No.: GA 000001900
Person responsible for form: Walter Riley Jr.
Date: 5/2/88

Air Pathway

Describe any potential air emission sources onsite:

None

Identify any sensitive environments within 4 miles:

Coastal Wetlands

Identify the maximally exposed individual (nearest residence or regularly occupied building - workers do count): Jordan Sign Co.

Groundwater Pathway

Identify any areas of karst terrain:

None

Identify additional population due to consideration of wells completed in overlying aquifers to the AOC: —

Do significant targets exist between 3 and 4 miles from the site?

more than 15600 persons live within a 4 mile radius.

Is the AOC a sole source aquifer according to Safe Drinking Water Act? (i.e. is the site located in Dade, Broward, Volusia, Putnam, or Flager County, Florida)

—

Surface Water Pathway

Are there intakes located on the extended 15-mile migration pathway?

Are there recreational areas, sensitive environments, or human food chain targets (fisheries) along the extended pathway?

Onsite Exposure Pathway

Is there waste or contaminated soil onsite at 2 feet below land surface or higher?

Yes

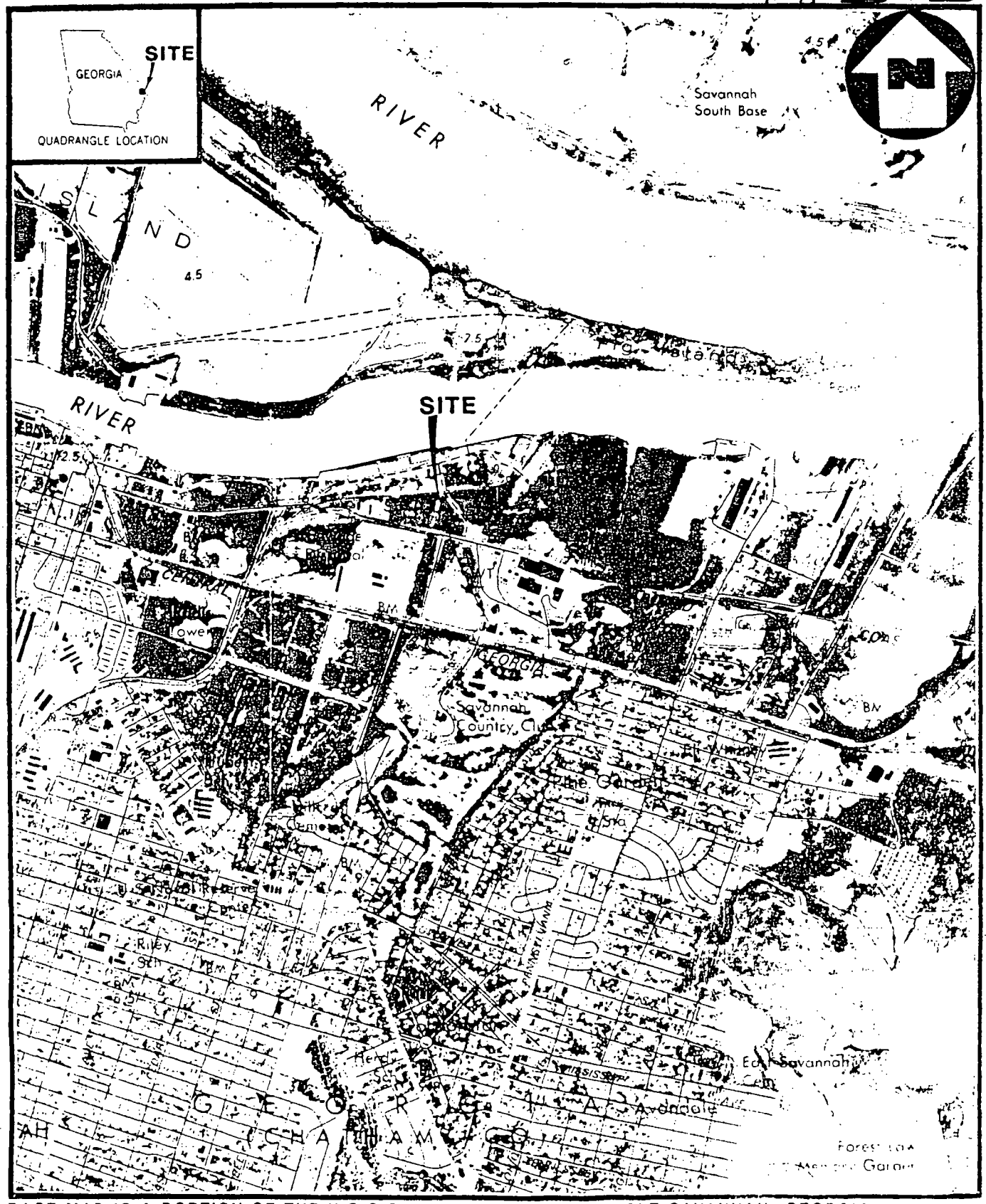
Is the site accessible to non-employees (workers do not count)?

Yes

Are there residences, schools, or daycare centers onsite or in close proximity?

Are there barriers to travel (e.g., a river) within one mile?

Yes



BASE MAP IS A PORTION OF THE U.S.G.S. 7.5 MINUTE QUADRANGLE SAVANNAH, GEORGIA, - SOUTH CAROLINA, 1978.

SITE LOCATION MAP
JORDAN SIGN COMPANY, INC.
SAVANNAH, GEORGIA

NUS CORPORATION

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REF. 3
Page 12 of 16

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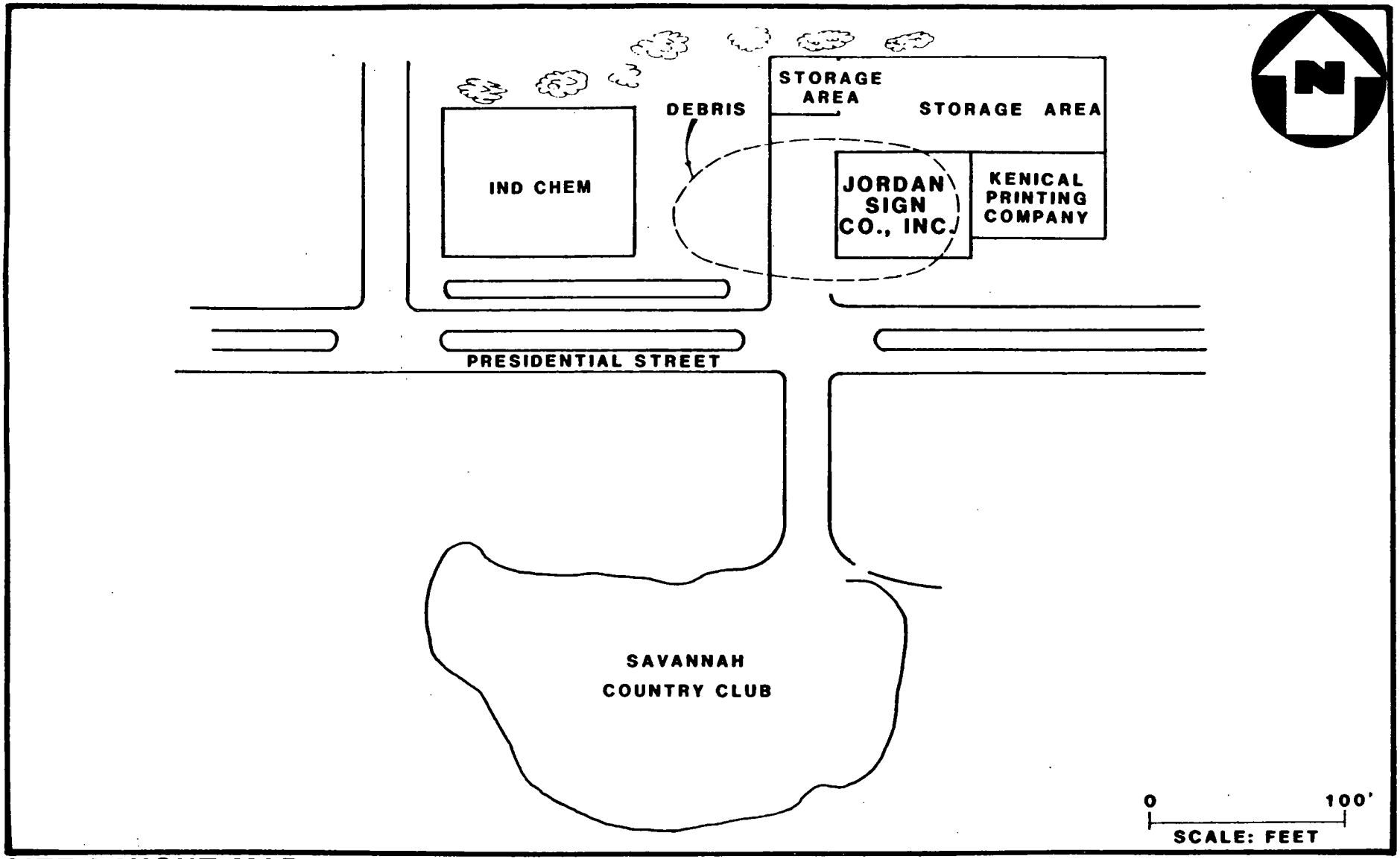


SITE LAYOUT MAP
JORDAN SIGN COMPANY, INC.
SAVANNAH, GEORGIA

NUS CORPORATION

Jordan Sign Company
Check for Correct GAD #
for Above Facility

A. GROUNDWATER

		HRS VALUES
1.	Is there an observed release? (Y or N or X) If "Y" go to #9.	N
2.	Depth to water table (feet)	250
3.	Depth to bottom of waste (feet)	10
4.	Precipitation (inches/year)	45.8
5.	Evaporation (inches/year)	43.
6.	Permeability (cm/sec)	1. x 10 - 6
7.	Physical state (assigned value)	3
8.	Containment (assigned value)	3
9.	Toxicity/persistence (substance codes)	710
10.	Waste quantity (cubic yards)	
	(drums)	1
	(gallons)	
	(tons)	
11.	Groundwater use (assigned value)	3
12.	Distance to nearest well (feet)	3500
13.	Population served (Houses)	
	(PWS-persons)	
	(PWS-connections)	6100
	(Irrigation-acres)	

HRS SCORE VERIFICATION AND RETRIEVAL SYSTEM
DATA ENTRY FORM

Revision _____
Date _____
Preparer _____

Site Name | J | O | R | D | A | N | | S | I | G | N | | C | O | | | | | |

| | | | | | | | | | | | | | | | | | | | |

Site Location

Municipality | S | A | V | A | N | N | A | H | | | | | | | | | | | |

County | [illegible] | A | T | H | A | M | | | | | | | | | | | | | |

State | G | A |

EPA Site Identification Number | G | A | 0 | 0 | 0 | 0 | 0 | 1 | 9 | 0 | 0 | |

Score Status | I |

1. In Preparation
2. Submitted to Region
3. Submitted to HQ QA
4. Proposed for NPL
5. Not NPL Qualified
6. On NPL

Scoring Done By (Name) | W | A | L | T | E | R | | P | I | L | E | Y | | | |

Of (Organization) | N | U | S | | | | | | | | | | | | |

On (Date) | 0 | 4 | — | 0 | 6 | — | 8 | 2 |

NUS Form EPA 5 5 6-6

REF. 3

NUS CORPORATION AND SUBSIDIARIES — **TELECON NOTE**

CONTROL NO:	DATE:	TIME:
	April 8, 1988	1045

DISTRIBUTION:

BETWEEN:	OF:	PHONE:
Robert B. Randolph (Hydrologist)	U.S. Geological Survey Doraville, Georgia	(404) 331-4858

AND:

John Jenkins, NUS Corporation

DISCUSSION:

The Hawthorn Formation is a competent confining unit in the Savannah area. The Hawthorn Formation contains local sand lenses which contains water under artesian conditions. There is a large cone of depression in Savannah with a very steep gradient. The cone of depression creates a downward component in the surficial aquifer. "There is definitely recharge to the principal artesian aquifer from above the cone of depression." The annual recharge of the principal artesian aquifer from the surficial aquifer is small, 0.2 inches to 0.5 inches using 1980 data. This recharge is a result of the cone of depression. The top of the principal artesian aquifer is approximately 140 feet below land surface. The surficial aquifer is approximately 80 feet thick or less. The transmissivity of the principal artesian aquifer ranges from 25000 to 50000 ft^2/day. The Hawthorn Formation is approximately 120 feet thick and thickens to the west.

ACTION ITEMS:

REF. 3

NUS CORPORATION AND SUBSIDIARIES — *TELECON NOTE*

CONTROL NO:	DATE:	TIME:
	4-11-88	13:47 hrs.

DISTRIBUTION:

BETWEEN:	OF:	PHONE:
Sgt. Tim Vincint Conservation Sargent	GA Game & Fish Division	(912) 727-2111

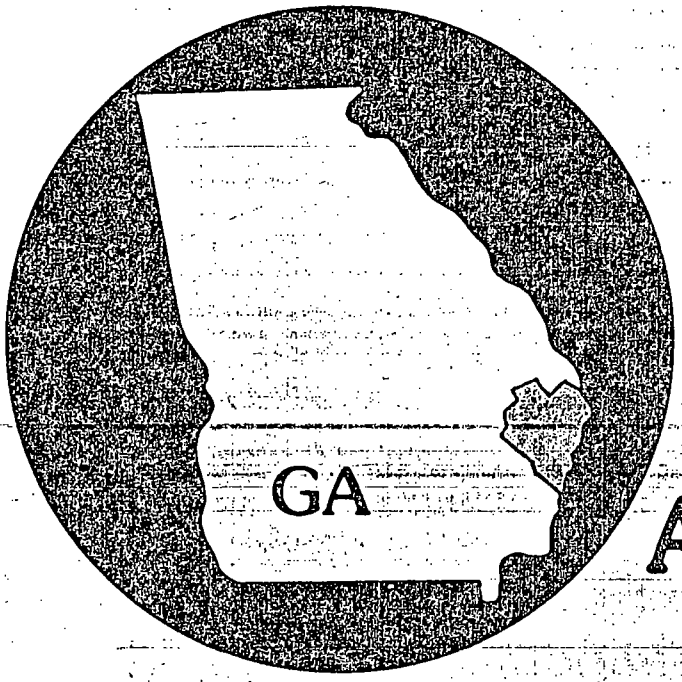
AND:

Steve Walker - NUS Corp. SW

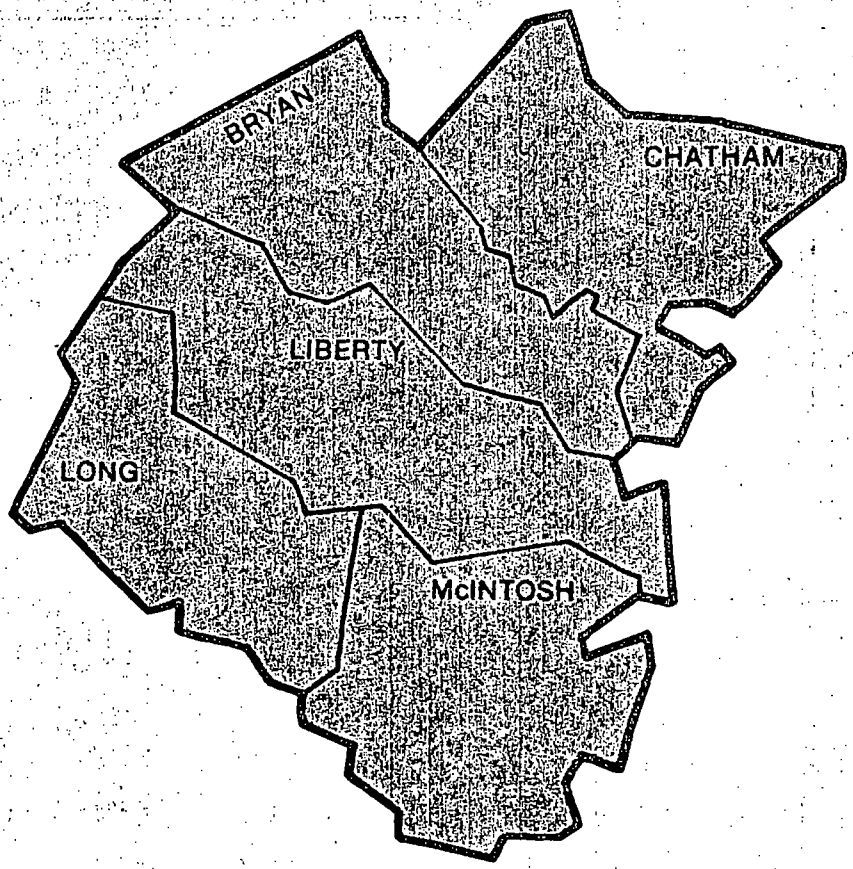
DISCUSSION:

I called Sgt. Vincint to inquire about fishing on the Savannah River. Sgt. Vincent stated that there is year-round recreational fishing on the Savannah River all the way from the I-95 overpass to the ocean. Sgt. Vincent stated that most recreational fishing is for bream (a food species) and this occurs on tributaries of the main channel of the Savannah River (the river divides into 3 channels below Savannah). There is also a commercial shad fishery on the river from January 1 to March 31 each year between the I-95 overpass and the mouth of the Savannah River. Shad roe is considered to be a delicacy.

ACTION ITEMS:



Resource Conservation Program and Action Plan



Coastal Soil and Water Conservation District

SECTION III SETTING

General Description

The Coastal Soil and Water Conservation District is located in the Atlantic Coast Flatwoods Major Land Resource Area. The District includes Bryan, Chatham, Liberty, Long and McIntosh Counties. The land area is 1,427,200 acres or 2,230 square miles. About 92,800 additional acres are in large water bodies. Thousands of acres of marsh lands are part of the District. The District drains to the Altamaha, Ogeechee and Savannah River Basin.

The land surface ranges from nearly level to gently sloping. Steeper areas are located in the northern part of the District.

Elevations range from mean sea level at the coast to 100 feet in the northern part of the District.

Along the seaward side are numerous islands, with the largest fronting the Atlantic Ocean. These low lying islands are made up of sandy wet-natured soils that are low in fertility. Lying between the large islands and the mainland are extensive salt marshes that are inundated daily by tides. On the mainland the major bodies of soils are the sandy hardpan soils of low fertility adjacent to the marshes, the sandy loam and clay loam soils with heavy subsoils found in the central area of the District and the sandy soils of the northeastern portion of the District. All of these soils are characterized by nearly level topography and lack of drainage, both surface and sub-surface. The exceptions to this are areas of well drained sandy soils occupying slight elevations or along stream valleys. The soils, in general, are low in fertility, but respond well to fertilization.

Almost 80 percent of the land is owned by individuals. The remainder is owned by corporations and local and state governments. The corporations are primarily wood producing companies. The largest state owned tracts are Skidaway Island State Park, Richmond Hill State Park and Sapelo Island Wildlife Management Area.

The two state colleges in the District are Savannah State College and Armstrong State College.

Table 1 - LAND AND WATER AREA 1977

COUNTY	TOTAL AREA	WATER AREA 1/	LAND AREA	FEDERAL LAND	NON-FEDERAL LAND
Bryan	291,200	7,680	283,520	106,112	177,408
Chatham	321,280	36,480	284,800	26,546	258,254
Liberty	343,040	14,080	328,960	109,103	219,857
Long	257,920	640	257,280	31,342	225,938
McIntosh	306,560	33,920	272,640	13,431	259,209
DISTRICT TOTAL	1,520,000	92,800	1,427,200	286,534	1,140,666

Source: USDA - Soil Conservation Service, 1977 Erosion Inventory

1/ Includes water bodies greater than 40 acres in size and streams wider than 1/8 miles.

The District is predominately rural except for areas adjacent to Darien, Richmond Hill, Hinesville, Ludowici, Pembroke and Savannah. Industrial developments and residential built-up areas has resulted in major land-use changes.

The District had a population of 222,992 in 1970. County seats were the most densely populated areas with Darien in McIntosh County 2,009; Hinesville in Liberty County 10,000; Ludowici in Bryan County 1,363 and Savannah in Chatham County 115,155.

Climate

The climate of the District is characterized by mild to hot, humid summers with variable winters alternating between short periods of cold and mild to warm temperatures. The local climate is influenced by influx of cold air from the north and warm winds from the Atlantic Ocean and Gulf of Mexico.

Average annual temperature is 67 degrees F. July, the hottest month, has an average monthly temperature of about 82 degrees F., with the average daily temperature ranging from 70 to 90 degrees F. December and January are the coldest months having average monthly temperatures of 48 to 52 degrees F. respectively. Early morning minimum temperatures drop to freezing or below on slightly more than one-tenth of the winter days. A reading below 20 degrees F. can be expected on one or more days during the winter.

Unusually cold air will occasionally drop temperatures to 16 degrees F. or below in the northern portion of the District. Annual frost-free days range from 260 days for the north to 280 days for the south.

The average annual precipitation varies from 49 to 52 inches. Summer and early fall are the wettest seasons. November, the driest month, normally has more than two inches of rain. Approximately 30 inches usually falls in March through September, the growing season for most crops.

Snowfall occurs infrequently with only a trace every 12 to 15 years.

According to the Environmental Science Service Administration of the U.S. Department of Commerce, fourteen tornadoes were reported in the District during the 17-year period from 1953 to 1969. All counties in the District, except Bryan, reported tornadoes. Chatham reported 10, McIntosh 2, Liberty and Long 1 each.

People

In 1930 the population of the District was 129,449. By 1960, it had increased to 219,250 and then increased to 256,620 by 1980. From 1930 to 1960 the population increased by 69 percent and then increased by 15.1 percent from 1960 to 1980. Most of the increase from 1960 to 1980 was in urban and rural non-farm population. These trends are expected to continue. The population projection is 290,900 by 2000. Most of the increase will be in urban and rural non-farm population.

Factors contributing to the projected increase in population include attractiveness of the community to agricultural, commercial, manufacturing and institutional interests as a place to live and work and closeness to the Savannah metropolitan historic and tourist area and the build-up of military strength at Ft. Stewart.

Average per capita income in 1969 and 1975 was $2,026 and $3,100 respectively. Chatham County had the highest with $2,658 to $4,333 for these years, increasing by 63 percent. Although Long County was the lowest at $1,630 and $2,958 it showed an increase of 81 percent.

According to Georgia Labor Department estimates, the labor force increased from 80,761 in 1973 to 93,298 in 1980. These estimates included people 16 years of age and older. In 1973, 4.2 percent or 3,391 people were unemployed. This increased to 6.1 percent or 5,665 people in 1980. A major portion of the unemployed in 1980 was in Chatham and Liberty Counties where 85 percent of the total unemployment occured.

According to the 1969 Census of Agriculture, there were 375 farm operators in the District with an average of 52.7 years. By 1974, the number dropped to 330 averaging 54.1 years of age. The 1.4 years increase indicates young people continue to leave farms.

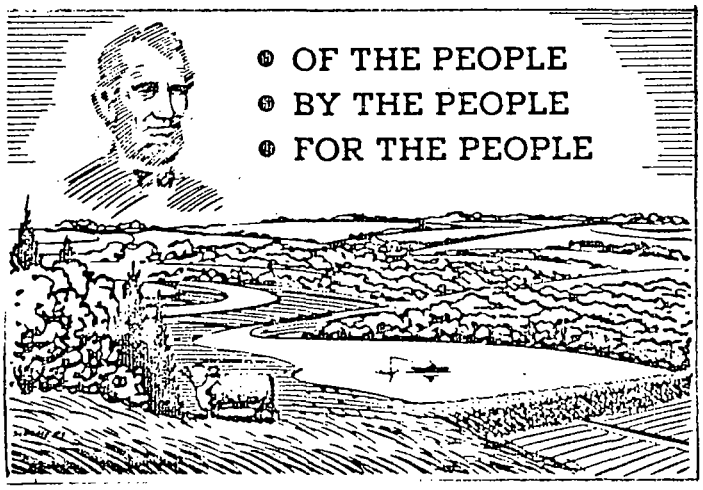


Table 2 - VALUE OF ALL FARM PRODUCTS SOLD 1939-1974

Farm Products	1939 ($) Value	1939 Per-cent	1959 ($) Value	1959 Per-cent	1974 ($) Value	1974 Per-cent
All Crops	379,356	35.3	712,747	19.4	3,309,000	54.5
Poultry and poultry products	71,319	6.6	654,032	17.8	9,000	.1
All other livestock and livestock products	625,420	58.1	2,271,767	61.8	2,751,000	45.3
TOTAL VALUE	1,076,095	100	3,638,546	99.0	6,069,000	99.9

Source: US Census of Agriculture 1939-1974

A year-round farmers market is located in Savannah and seasonal markets are located in Glenville and Jesup. These are excellent farm markets accessible to all farmers in the District.

Forestry

Over the past 10 to 12 years, the amount of commercial forestland in the Coastal Soil and Water Conservation District has decreased by almost four percent. With this decrease, 72.5 percent of the total land area is now classed as commercial forestland. This classification applies to land producing or capable of producing crops of industrial wood and not withdrawn from timber utilization.

The 1.0 million acres of commercial forest land within the District offer both a challenge and a tremendous economic opportunity. A conservative estimate of the income received by landowners in 1974 from the sale of standing timber is about $7.5 million. Assuming each of these dollars generates eleven additional dollars through harvesting, processing, manufacturing, construction, etc., the total economic contribution to the District from wood products would approach $90 million. Additional benefits are realized from wildlife, soil and water conservation and recreational pursuits.

The latest survey of forest resources shows that the District's timberlands are currently growing more wood than is being harvested. According to the survey, about 76 percent of the annual growth is being removed. In view of the nation's projected future wood demands, this situation cannot be looked at with too much optimism.

By the year 2000, demand for wood-products is anticipated to increase by over 70 percent. An increasing population, coupled with a declining forestland base, will exert tremendous pressure on the nation's forest acres to produce future supplies of wood. Unless a more favorable balance between growth and drain can be attained within the District, many of the markets presently established may be closed or moved to locations with a more favorable growth-drain ratio.

Farmers and other private individuals own slightly more than one of every three acres of commercial forestland within the Coastal District. Forest industries own or lease about 40 percent of the commercial forestland, and the balance (23 percent) is classed as public ownership. These lands are controlled by various units of local, state and federal governments. About 24 percent (248,800 acres) of the forest area is considered poorly stocked. Getting these acres into full production is a challenge to landowners within the District. Reforestation, timber stand improvement and other intensive management practices must be undertaken if the District's yield of timber is to be increased and the economy of the District is to be enhanced from forest resources.

Outdoor Recreation

Federal, state and local governmental agencies own and operate a major portion of the recreation developments in the District. However, there are a number of private recreation developments.

Publicly owned and operated recreation developments in the District include the following:

Richmond Hill State Park
Fort Pulaski National Monument

Fort McAllister
Skidaway Island State Park
Savannah River Beach

Private recreation developments located throughout the District include: camping, picnicking, parks, zoos, rodeo, racing, fishing, trails, boating, swimming, golf, rockhounding, hunting and horseback riding.

There is a steady growth in the number of annual visitors to recreation developments in the District. As a result of increasing needs federal, state and local governmental agencies, along with private owners, are expanding present facilities and constructing new developments.

Numerous private recreation developments are now in various stages of construction in most areas. A number of tracts have been purchased for recreation developments and subdivisions.

The location, natural resources and recreation demands require a carefully planned recreational program for the District.

Business, Industry and Mining

In the late 1940's, people in the District recognized a need to improve economic conditions. Local organizations and groups and city and county officials began to establish new non-agricultural businesses and industries. As a result, industrial parks were soon established in Bryan, Chatham, Liberty and McIntosh Counties.

Presently, there are 283 industries and 4,252 other business or service firms located in the District. Industries employ approximately 19,645 people and other business and services employ another 65,323. One-hundred and ninety agriculturally oriented businesses employ about 2,631 people in processing and manufacturing cotton materials. Other industries include feed conveyors, feed trailers, garment factories and processing livestock and livestock products.

Currently there are twenty-four mines in the District, four mine sand and twenty fill material.

A large percent of the labor force commutes to jobs outside the District. Primary work centers are Savannah, Hinesville and Brunswick. The Savannah area has the heaviest concentration of jobs.

Transportation and Utilities

The Coastal Soil and Water Conservation District has an excellent system of roads, highways, railroads, three small airports and a commercial airport in Savannah. It is also served by the Brunswick commercial airport.

There are approximately 1,567 miles of rural roads in the District occupying 9,424 acres of land. Approximately 71 percent of these roads are paved and the remaining roads are dirt or gravel. The District has access to Interstate 16 and 95 located within the District.

Other major highways include US Highways 17, 17A, 25, 80, 82 and 280 and Georgia Highways 99, 251, 131, 196, 25, 38, 119, 129, 144, 67, 405, 30, 204, 17, 16, 26, 307 and 367.

These highways are located throughout the District and provide adequate transportation routes to each landowner, community, town and city. There are three small public airports located within the District. The other two are located at Darien and Walthourville, Wright Army Airfield is located at Fort Stewart. No point in the District is more than 60 miles from Savannah or Brunswick.

Utilities in the District include water, sanitary systems, electricity, natural gas and telephone.

Major sources of water are: reservoirs, rivers, creeks, springs and wells. All of the incorporated cities in the District have their own systems. The most extensive rural systems are in Chatham and McIntosh Counties. In addition to these public water systems, there are a few private systems serving industrial, recreation developments and farmsteads.

According to the Coastal Area Planning and Development Commission, all public water systems in the District plan to improve and expand service areas.

There are about 46,675 acres of prime farmland in the District. Prime farmland is the land best suited for producing food, feed, forage, fiber and oilseed crops. It has the soil quality, growing season and moisture supply needed to economically produce sustained high yields of crops when treated and managed by modern farm methods. It is available for these uses and has not been pre-empted by urban development. About 2,730 acres of former prime farmland is now in urban land use in the District. Table 6 - USE OF PRIME FARMLAND shows prime farmland distribution by counties and uses.

Table 6 - USE OF PRIME FARMLAND

COUNTY	CROP	PASTURE	FOREST	IDLE	TOTAL	PRE-EMPTED BY URBAN
Bryan	7,500	1,020	21,000	450	29,970	1,050
Chatham	200	100	1,550	75	1,925	925
Liberty	1,033	125	350	75	1,583	325
Long	5,100	950	4,701	250	11,001	225
McIntosh	210	520	1,341	125	2,196	205
DISTRICT TOTAL	14,043	2,715	28,942 1/	975	46,675	2,730

Data from Herschel L. Paulk, Soil Scientist, USDA-Soil Conservation Service, February 1980.

1/ Approximately 4,800 acres of the forest on prime farmland are within Fort Stewart Reservation.

Water Resource

The primary source of supply for the District is groundwater with a very small amount supplied from surface water. Groundwater for the District comes from deep wells. Surface water is supplied by intakes on the Altamaha and Ocmulgee Rivers and a number of privately owned ponds.

A combination of climatic and physical characteristics of the aquifers and the drainage areas for streams in the District has provided an ample supply to meet present water needs.

Underlying permeable limestone is the major source of water for deep wells. Layers of sand, gravel and clay interposed between this permeable limestone and the land surface provide water for shallow wells.

Groundwater levels fluctuate in response to the amount of rainfall recharging the aquifer and to pumpage. Recovery from seasonal water use is dependent upon the precipitation and temperature.

In some areas, stream flows fluctuate and will prohibit projected needs from streams being available the year round. Stream flows are usually high in the winter and early spring. The flows recede in summer and remain low through autumn.

The headwaters of most major streams are in the Blue Ridge, Southern Coastal Plain and Piedmont Major Land Resource Areas. The water quality of these streams is usually good.

All the municipalities, farm homesteads, livestock and most of the irrigation and industrial water needs in the District are supplied from wells. The Altamaha, Ogeechee and Savannah Rivers provide water for a number of industries and some irrigation.

According to the area-wide water and sewer plan prepared by the Coastal Area Planning and Development Commission, there are plans to improve and expand all public systems.

Fish and Wildlife Resource

The Coastal District has a great variety of fish and wildlife species. This is a result of abundant warm water habitat along with vast upland, bottom, wetland wildlife habitat. The coastal areas principal game fish in the District are bluegill, sunfish, largemouth bass and channel catfish.

The fresh water fishing resources include approximately 157 farm ponds, a number of streams and sinkholes located throughout the District. Principal streams that support fishing are the Altamaha, Ogeechee, Canoochee and Savannah Rivers. Most of the fishing pressure is on these

NUS CORPORATION

1927 LAKESIDE PARKWAY
SUITE 614
TUCKER, GEORGIA 30084
404-938-7710

C-586-5-8-75

May 23, 1988

Mr. Robert Jourdan
Site Investigation and Support Branch
Waste Management Division
Environmental Protection Agency
345 Courtland Street, N. E.
Atlanta, Georgia 30365

Date: _____
Site Disposition: _____
EPA Project Manager: _____

Subject: Preliminary Reassessment PAR
Rheem Manufacturing Company
Savannah, Chatham County, Georgia
GAD051033728
TDD No. F4-8803-55

Dear Mr. Jourdan:

FIT 4 conducted a Preliminary Reassessment of the Rheem Manufacturing facility in Savannah, Chatham County, Georgia. The reassessment included a review of EPA file material, a target survey and an offsite reconnaissance of the facility.

Rheem Manufacturing Company is located at 139 Brampton Road, Savannah, Georgia. The facility was purchased by Georgia Drum Company near the end of 1987. The facility is used as a manufacturing plant for steel drums and has been in operation since 1968. Drum painting activities generate spent toluene, xylene, methyl ethyl ketone and possibly lead. The waste solvents are recycled on site by distillation. Hazardous waste generated on site consists of still bottoms from the distillation. This sludge is drummed, stored and shipped off-site. An estimated 79.2 tons of chemicals, consisting of toluene, methyl ethyl ketone, carbon disulfide, iso-butanol, and still bottoms are stored in containers each year (Ref. 1).

The climate is characterized by mild temperatures and abundant rainfall (Ref. 2). The average annual precipitation is 45.75 inches, the average annual evaporation is 44.0 inches, and the average annual temperature is 66.4 degrees Fahrenheit (Ref. 2).

Horizontal sedimentary rocks comprise the water bearing units of concern in the Savannah area. Surficial sediments of Quaternary age form the Savannah area's surficial aquifer (Ref. 3). This surficial unit is composed mainly of sand and is generally less than 80 feet thick in the Savannah area (Ref. 5). The water table is approximately five feet below land surface at the Rheem facility. Groundwater from the surficial aquifer is adequate for domestic use in some inland areas, but near the ocean and along tidal estuaries, brackish water is often encountered (Ref. 2). Sandy deposits of the surficial aquifer rest unconformably upon the Hawthorn Formation (Ref. 2). The Hawthorn Formation is of Miocene age is composed of sandy silt, feldspathic phosphatic sand, and slightly dolomitic sandy, phosphatic, fossiliferous limestone (Ref. 3). In the Savannah area, a thick section of

green silt and clay contributes to the Hawthorn Formation's confining properties (Ref. 2). Thick sand zones and lenses of limestone produce moderately large volumes of water under artesian conditions (Refs. 2,5). The Hawthorn Formation is approximately 120 feet thick in Savannah, and even though it is used as a source of water for private wells, it is an important confining bed (Refs. 2,5) . Underlying formations of Miocene, Oligocene and Eocene ages are collectively termed the principal artesian aquifer (Ref. 2). In descending stratigraphic order of these formations are composed of the Tampa Limestone, undifferentiated rocks, the Ocala Limestone, the Gosport Sand, and the Lisbon Formation. The Lisbon serves as the lower confining unit (Ref. 2). Yields in the principal artesian aquifer average 200 gpm in the Ocala limestone (Ref. 2). Transmissivity in the principal artesian aquifer ranges form 25,000 to 50,000 sq. ft/day in the Savannah area (Refs. 6,3). Large groundwater withdrawals from the principal artesian aquifer in Savannah have caused a cone of depression which laterally extends beyond the city (Ref. 4). This cone of depression has a very steep gradient which results in a downward component in the surficial aquifer's movement and in recharge from above the cone of depression (Ref. 5). Although this hydraulic connection between the surficial aquifer and the principal artesian is very small, recharging the principal artesian aquifer by 0.2 inches to 0.5 inches annually, interconnection is documented (Ref. 5,6). This also hydraulically connects the scattered artesian aquifers within the Hawthorn Formation with both the surficial aquifer and the principal artesian aquifer.

There are no records of this facility ever having a spill on the premises. Also, there are not any records which indicate that the facility disposed of any hazardous substances on site. Savannah Laboratories and Environmental Services analyzed four soil samples in November of 1982. Rheem Manufacturing obtained these samples from various locations of their property. Results as high as 37 mg/kg of toluene, and 11 mg/kg of methyl ethyl ketone were detected (Ref. 7).

The nearest well to the facility is the Garden City #3 well, which is approximately one half mile southwest of Rheem Manufacturing. This municipal well is 1000 feet deep and is completed in the principal artesian aquifer. The nearest city of Savannah Municipal well is located 3800 feet south of Rheem Manufacturing. This particular well is designated number 25 and is also completed in the principal artesian aquifer. The nearest private well is owned by Miss Dorothy Issac. The well is approximately 170 feet deep and is located seven thousand feet southwest of Rheem Manufacturing.

Single and multi-family dwellings are located directly across Highway 17 from the Rheem facility. The Haynes school is located approximately one mile southwest of the facility (Ref. 8). Surface run-off from the facility enters the Savannah River approximately one mile east of the site. Year round recreational fishing takes place on the Savannah River (1.5 miles east of Rheem Manufacturing), as well as commercial fishing between the months of January and March (Ref. 9).

Due to the hydraulic interconnection between the principal artesian aquifer and the surficial aquifer, any contaminants released on the surface at the site could potentially impact the populations of Savannah, Garden City and Port Wentworth.

Based on the enclosures within and the above referenced material, an SSI is recommended on a medium priority basis.

Very truly yours,

John McKeown
Project Manager

Approved:

JM/dw

Enclosures

REFERENCES

1. Knowles, Gilda, 1985. Georgia Department of Natural Resources-EPD; Preliminary Assessment. August 27, 1985.

2. Counts, H. B., and Donsky, E., 1963. Salt-Water Enroachment Geology and Ground-Water Resources of Savannah Area-Georgia and South Carolina; U. S. Geological Survey Water-Supply Paper 1611, 100p.

3. Krause, R. E., S. E. Matthews, and H. E. Gill, 1984. Evaluation of the Ground-Water Resources of Coastal Georgia Preliminary Report on the Data Available as of July, 1983, Georgia Department of Natural Resources Environmental Protection Division, Georgia Geologic Survey in Cooperation with the U. S. Geological Survey. Information Circular 62, 55p.

4. Clarke, J. S., et al, 1987. Ground-Water Data for Georgia 1986, U. S. Geological Survey Open-File Report 87-376, 177p.

5. Randolph, R. B., 1988. Hydrologist, U. S. Geological Survey, Doraville, Georgia. Telephone conversation with John Jenkins, Geologist, NUS Corp., April 8, 1988. Subject: Hawthorn Formation.

6. Randolph, R. B., and Krause, R. E., 1984. Analysis of the Effect of Proposed Pumping from the Principal Artesian Aquifer, Savannah, Georgia, Area, U. S. Geological Survey Prepared in cooperation with the U. S. Army Corps of Engineers, Water-Resources Investigations Report 84-4064, 26p. 331-4858

7. Andrews, James W., PhD, 1982. Savannah Laboratories and Environmental Services. Report of Analysis-Rheem Manufacturing Co., November 22, 1982.

8. Walker, Steve, 1988. NUS Corporation Logbook for Rheem Manufacturing Co., Savannah, GA; #F4-746.

9. Vincent, Tim, 1988. Georgia Game and Fish Division. Telephone conversation with Steve Walker, Geologist, NUS Corporation, April 11, 1988. Subject: Fishing in waters near Rheem Manufacturing.

10. U. S. Geological Survey. Topographic Quadrangles: Limeshouse, SC-GA (1980); Port Wentworth, GA-SC (1980); Garden City, GA (1980); Savannah, GA-SC (1980). 7.5 minute series, scale 1:24,000.

APPENDIX A

U.S. EPA REGION IV

SDMS

Unscannable Material Target Sheet

DocID: 10656629 Site ID: GADOOB293057

Site Name: Jordan Sign Company

Nature of Material:

Map:	☑	Computer Disks:	☐
Photos:	☐	CD-ROM:	☐
Blueprints:	☐	Oversized Report:	☐
Slides:	☐	Log Book:	☐

Other (describe): Radius Map

Amount of material: _____

* Please contact the appropriate Records Center to view the material *

APPENDIX B

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 1 - SITE LOCATION AND INSPECTION INFORMATION

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
GA	D003293057

II. SITE NAME AND LOCATION

01 SITE NAME (Legal, common, or descriptive name of site)	02 STREET, ROUTE NO., OR SPECIFIC LOCATION IDENTIFIER				
Jordan Sign Company, Inc	1690 East President Street Extension				
03 CITY	**04 STATE**	**05 ZIP CODE**	**06 COUNTY**	**07 COUNTY CODE**	**08 CONG DIST**
Savannah	Ga.	31404	Chatham	051	01

09 COORDINATES: LATITUDE 32° 04' 42.0" | LONGITUDE 081° 05' 36.0"

10 TYPE OF OWNERSHIP (Check one): ☒ A. PRIVATE ☐ B. FEDERAL _____ ☐ C. STATE ☐ D. COUNTY ☐ E. MUNICIPAL ☐ F. OTHER _____ ☒ G. UNKNOWN

III. INSPECTION INFORMATION

01 DATE OF INSPECTION	02 SITE STATUS	03 YEARS OF OPERATION
8 25 88 (MONTH DAY YEAR)	☐ ACTIVE ☒ INACTIVE	Early 1970's (BEGINNING YEAR) Unknown (ENDING YEAR) ☐ UNKNOWN

04 AGENCY PERFORMING INSPECTION (Check all that apply)

☐ A. EPA ☐ B. EPA CONTRACTOR _____ (Name of firm) ☐ C. MUNICIPAL ☐ D. MUNICIPAL CONTRACTOR _____ (Name of firm)
☒ E. STATE ☐ F. STATE CONTRACTOR _____ (Name of firm) ☐ G. OTHER _____ (Specify)

05 CHIEF INSPECTOR	06 TITLE	07 ORGANIZATION	08 TELEPHONE NO.
Charles P. Evans	Environmental Specialist	Site Assessment Unit	(404) 656-7404
09 OTHER INSPECTORS	10 TITLE	11 ORGANIZATION	12 TELEPHONE NO.
Marlin Gottschalk	Unit Coordinator	Site Assessment Unit	(404) 656-7404
"			( )
			( )
			( )
			( )

13 SITE REPRESENTATIVES INTERVIEWED	14 TITLE	15 ADDRESS	16 TELEPHONE NO
Mr. Hoyt Jordan	Previous Owner	Jordan Sign Company	(912) 234-4493
		1690 E. President St. Ext.	( )
		Savannah, Ga. 31404	( )
Mr. Reed Dulany	Current Owner	Southern State Phosphate	(912) 232-1101
		and Fertilizer Company	( )
		P.O. Box 546	( )
		Savannah, Ga. 31498	

17 ACCESS GAINED BY (Check one)	18 TIME OF INSPECTION	19 WEATHER CONDITIONS
☒ PERMISSION ☐ WARRANT	10:00AM	85° F., Fair, Partly Sunny

IV. INFORMATION AVAILABLE FROM

01 CONTACT	02 OF (Agency/Organization)	03 TELEPHONE NO
Mr. Hoyt Jordan	Jordan Sign Company, Inc.	(912) 234-4493

04 PERSON RESPONSIBLE FOR SITE INSPECTION FORM	05 AGENCY	06 ORGANIZATION	07 TELEPHONE NO.	08 DATE
Gilda A. Knowles	DNR	EPD-SAU	(404) 656-7404	9 28 88 (MONTH DAY YEAR)

EPA FORM 2070-13 (7-81)

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 2 - WASTE INFORMATION

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
GA	D003293057

II. WASTE STATES, QUANTITIES, AND CHARACTERISTICS

01 PHYSICAL STATES (Check all that apply)

- ☐ A. SOLID
- ☐ B. POWDER, FINES
- ☑ C. SLUDGE
- ☐ D. OTHER (Specify)
- ☐ E. SLURRY
- ☑ F. LIQUID
- ☐ G. GAS

02 WASTE QUANTITY AT SITE (Measures of waste quantities must be independent)

- TONS
- CUBIC YARDS
- NO. OF DRUMS: Unknown

03 WASTE CHARACTERISTICS (Check all that apply)

- ☑ A. TOXIC
- ☑ B. CORROSIVE
- ☐ C. RADIOACTIVE
- ☐ D. PERSISTENT
- ☐ E. SOLUBLE
- ☐ F. INFECTIOUS
- ☐ G. FLAMMABLE
- ☐ H. IGNITABLE
- ☐ I. HIGHLY VOLATILE
- ☐ J. EXPLOSIVE
- ☐ K. REACTIVE
- ☐ L. INCOMPATIBLE
- ☐ M. NOT APPLICABLE

III. WASTE TYPE

CATEGORY	SUBSTANCE NAME	01 GROSS AMOUNT	02 UNIT OF MEASURE	03 COMMENTS
SLU	SLUDGE			
OLW	OILY WASTE			
SOL	SOLVENTS			
PSD	PESTICIDES			
OCC	OTHER ORGANIC CHEMICALS			
IOC	INORGANIC CHEMICALS			
ACD	ACIDS			
BAS	BASES			
MES	HEAVY METALS	Unknown	Unknown	—

IV. HAZARDOUS SUBSTANCES (See Appendix for most frequently cited CAS Numbers)

01 CATEGORY	02 SUBSTANCE NAME	03 CAS NUMBER	04 STORAGE/DISPOSAL METHOD	05 CONCENTRATION	06 MEASURE OF CONCENTRATION
MES	Arsenic	7440382	Wastes were landfilled on-site	27,000	ug/L
	Barium	7440393		1,100	ug/L
	Cadmium	7440439		720	ug/L
	Chromium	7440473		1,700	ug/L
	Nickel	7440020		540	ug/L
	Lead	7439921		33,000	ug/L

V. FEEDSTOCKS (See Appendix for CAS Numbers)

CATEGORY	01 FEEDSTOCK NAME	02 CAS NUMBER	CATEGORY	01 FEEDSTOCK NAME	02 CAS NUMBER
FDS			FDS		
FDS			FDS		
FDS			FDS		
FDS			FDS		

VI. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis, reports)

Georgia EPD State Files; Jordan Sign Company, Inc.
GAD003293057
Savannah, Georgia

EPA FORM 2070-13(7-81)

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 3 - DESCRIPTION OF HAZARDOUS CONDITIONS AND INCIDENTS

I. IDENTIFICATION
01 STATE: GA | 02 SITE NUMBER: D003293507

II. HAZARDOUS CONDITIONS AND INCIDENTS

01 ☒ A. GROUNDWATER CONTAMINATION
03 POPULATION POTENTIALLY AFFECTED: 1mi = 7,232
02 ☒ OBSERVED (DATE: 10-18-88) ☐ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION
Laboratory analysis resulting from a ground water sample collected on-site, prove that water has been contaminated with high concentrations of arsenic, barium, cadmium, chromium, nickel and lead.

01 ☐ B. SURFACE WATER CONTAMINATION
03 POPULATION POTENTIALLY AFFECTED: _____
02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION

01 ☐ C. CONTAMINATION OF AIR
03 POPULATION POTENTIALLY AFFECTED: _____
02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION

01 ☐ D. FIRE/EXPLOSIVE CONDITIONS
03 POPULATION POTENTIALLY AFFECTED: _____
02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION

01 ☒ E. DIRECT CONTACT
03 POPULATION POTENTIALLY AFFECTED: 1mi = 7,232
02 ☒ OBSERVED (DATE: 8-26-88) ☐ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION
The site is easily accessible to the public.

01 ☐ F. CONTAMINATION OF SOIL
03 AREA POTENTIALLY AFFECTED: _____ (Acres)
02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION

01 ☐ G. DRINKING WATER CONTAMINATION
03 POPULATION POTENTIALLY AFFECTED: _____
02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION

01 ☐ H. WORKER EXPOSURE/INJURY
03 WORKERS POTENTIALLY AFFECTED: _____
02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION

01 ☐ I. POPULATION EXPOSURE/INJURY
03 POPULATION POTENTIALLY AFFECTED: _____
02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 3 - DESCRIPTION OF HAZARDOUS CONDITIONS AND INCIDENTS

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
GA	D003293057

II. HAZARDOUS CONDITIONS AND INCIDENTS (Continued)

01 ☐ J. DAMAGE TO FLORA — 02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION

01 ☐ K. DAMAGE TO FAUNA — 02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION (Include name(s) of species)

01 ☐ L. CONTAMINATION OF FOOD CHAIN — 02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION

01 ☐ M. UNSTABLE CONTAINMENT OF WASTES (Spills/Runoff/Standing liquids, Leaking drums) — 02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: _____ 04 NARRATIVE DESCRIPTION

01 ☐ N. DAMAGE TO OFFSITE PROPERTY — 02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION

01 ☐ O. CONTAMINATION OF SEWERS, STORM DRAINS, WWTPs — 02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION

01 ☐ P. ILLEGAL/UNAUTHORIZED DUMPING — 02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION

05 DESCRIPTION OF ANY OTHER KNOWN, POTENTIAL, OR ALLEGED HAZARDS

III. TOTAL POPULATION POTENTIALLY AFFECTED: 1 mile = 7,232 ; 2 miles = 28,927 ; 3 miles = 65,085 ; 4 miles = 144,634

IV. COMMENTS

V. SOURCES OF INFORMATION (Cite specific references, e.g. state files, sample analysis, reports)

Georgia-EPD State Files; Jordan Sign Company
GAD003293057
Savannah, Georgia

EPA FORM 2070-13 (7-81)

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION
PART 4 - PERMIT AND DESCRIPTIVE INFORMATION

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
GA	D003293057

II. PERMIT INFORMATION

01 TYPE OF PERMIT ISSUED (Check all that apply)	02 PERMIT NUMBER	03 DATE ISSUED	04 EXPIRATION DATE	05 COMMENTS
☐ A. NPDES				
☐ B. UIC				
☐ C. AIR				
☐ D. RCRA				
☐ E. RCRA INTERIM STATUS				
☐ F. SPCC PLAN				
☐ G. STATE (Specify)				
☐ H. LOCAL (Specify)				
☐ I. OTHER (Specify)				
☒ J. NONE				

III. SITE DESCRIPTION

01 STORAGE/DISPOSAL (Check all that apply)	02 AMOUNT	03 UNIT OF MEASURE
☐ A. SURFACE IMPOUNDMENT		
☐ B. PILES		
☐ C. DRUMS, ABOVE GROUND		
☐ D. TANK, ABOVE GROUND		
☐ E. TANK, BELOW GROUND		
☒ F. LANDFILL	Unknown	Unknown
☐ G. LANDFARM		
☐ H. OPEN DUMP		
☐ I. OTHER (Specify)		

04 TREATMENT (Check all that apply)

- ☐ A. INCENERATION
- ☐ B. UNDERGROUND INJECTION
- ☐ C. CHEMICAL/PHYSICAL
- ☐ D. BIOLOGICAL
- ☐ E. WASTE OIL PROCESSING
- ☐ F. SOLVENT RECOVERY
- ☐ G. OTHER RECYCLING/RECOVERY
- ☐ H. OTHER (Specify) Unknown

05 OTHER

☐ A. BUILDINGS ON SITE

None

06 AREA OF SITE

23.5 (Acres)

07 COMMENTS

N/A.

IV. CONTAINMENT

01 CONTAINMENT OF WASTES (Check one)

☐ A. ADEQUATE, SECURE ☑ B. MODERATE ☐ C. INADEQUATE, POOR ☐ D. INSECURE, UNSOUND, DANGEROUS

02 DESCRIPTION OF DRUMS, DIKING, LINERS, BARRIERS, ETC.

A drainage ditch runs along the rear and west perimeter of the site.

V. ACCESSIBILITY

01 WASTE EASILY ACCESSIBLE: ☒ YES ☐ NO

02 COMMENTS A fence (barrier) does not surround property. Site is easily accessible to the public.

VI. SOURCES OF INFORMATION (Cite specific references, e.g. state files, sample analysis, reports)

Georgia-EPD State Files; Jordan Sign Company, Inc.
GAD003293057
Savannah, Georgia

EPA FORM 2070-13 (7-81)

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 5 - WATER, DEMOGRAPHIC, AND ENVIRONMENTAL DATA

I. IDENTIFICATION
01 STATE: GA | 02 SITE NUMBER: 003293057

II. DRINKING WATER SUPPLY

01 TYPE OF DRINKING SUPPLY (Check as applicable)

	SURFACE	WELL
COMMUNITY	A. ☐	B. ☑
NON-COMMUNITY	C. ☐	D. ☐

02 STATUS (Potential)

ENDANGERED	AFFECTED	MONITORED
A. ☑	B. ☐	C. ☐
D. ☐	E. ☐	F. ☐

03 DISTANCE TO SITE
A. 0.75 (mi)
B. _____ (mi)

III. GROUNDWATER

01 GROUNDWATER USE IN VICINITY (Check one)
☑ A. ONLY SOURCE FOR DRINKING ☐ B. DRINKING (Other sources available) COMMERCIAL, INDUSTRIAL, IRRIGATION (No other water sources available) ☐ C. COMMERCIAL, INDUSTRIAL, IRRIGATION (Limited other sources available) ☐ D. NOT USED, UNUSEABLE

02 POPULATION SERVED BY GROUND WATER >15,000
03 DISTANCE TO NEAREST DRINKING WATER WELL 0.75 (mi)

04 DEPTH TO GROUNDWATER	05 DIRECTION OF GROUNDWATER FLOW	06 DEPTH TO AQUIFER OF CONCERN	07 POTENTIAL YIELD OF AQUIFER	08 SOLE SOURCE AQUIFER
5.0 (ft)	Unknown	0.0 (ft)	7.3 mgd (gpd)	☐ YES ☑ NO

09 DESCRIPTION OF WELLS (Including useage, depth, and location relative to population and buildings) There are 16 wells known to be within a 4-mile radius of the site. Fourteen of these wells belong to the Savannah Municipal System. All of these wells draw water from the principal artesian aquifer. These wells range in depths from 498 ft. to 903 ft. The other two wells are private wells and range in depths from 100 feet to 360 ft.

10 RECHARGE AREA		11 DISCHARGE AREA	
☑ YES ☐ NO	COMMENTS: The principal artesian aquifer is recharged 0.2 to 6.5 inches annually	☐ YES ☐ NO	COMMENTS: Unknown.

IV. SURFACE WATER

01 SURFACE WATER USE (Check one)
☑ A. RESERVOIR, RECREATION DRINKING WATER SOURCE ☐ B. IRRIGATION, ECONOMICALLY IMPORTANT RESOURCES ☐ C. COMMERCIAL, INDUSTRIAL ☐ D. NOT CURRENTLY USED

02 AFFECTED/POTENTIALLY AFFECTED BODIES OF WATER

NAME:	AFFECTED	DISTANCE TO SITE
Kayton Canal which eventually empties into Savannah River	☐	< 0.25 (mi)
	☐	(mi)
	☑	(mi)

V. DEMOGRAPHIC AND PROPERTY INFORMATION

01 TOTAL POPULATION WITHIN

ONE (1) MILE OF SITE	TWO (2) MILES OF SITE	THREE (3) MILES OF SITE
A. 7,232 NO. OF PERSONS	B. 28,927 NO. OF PERSONS	C. 65,085 NO. OF PERSONS

02 DISTANCE TO NEAREST POPULATION: < 0.25 (mi)

03 NUMBER OF BUILDINGS WITHIN TWO (2) MILES OF SITE: >4,000
04 DISTANCE TO NEAREST OFF-SITE BUILDING: < 0.25 (mi)

05 POPULATION WITHIN VICINITY OF SITE (Provide narrative description of nature of population within vicinity of site, e.g., rural, village, densely populated urban area)
The area in the vicinity of the site is densely populated. Site is situated in the city of Savannah and is located directly across from a Savannah Country Club.

EPA FORM 2070-13 (7-81)

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 5 - WATER, DEMOGRAPHIC, AND ENVIRONMENTAL DATA

I. IDENTIFICATION
01 STATE: GA | 02 SITE NUMBER: D003293057

VI. ENVIRONMENTAL INFORMATION

01 PERMEABILITY OF UNSATURATED ZONE (Check one)

☑ A. $10^{-6} - 10^{-8}$ cm/sec ☐ B. $10^{-4} - 10^{-6}$ cm/sec ☐ C. $10^{-4} - 10^{-3}$ cm/sec ☐ D. GREATER THAN 10^{-3} cm/sec

02 PERMEABILITY OF BEDROCK (Check one)

☐ A. IMPERMEABLE (Less than 10^{-6} cm/sec) ☑ B. RELATIVELY IMPERMEABLE ($10^{-4} - 10^{-6}$ cm/sec) ☐ C. RELATIVELY PERMEABLE ($10^{-2} - 10^{-4}$ cm/sec) ☐ D. VERY PERMEABLE (Greater than 10^{-2} cm/sec)

03 DEPTH TO BEDROCK	04 DEPTH OF CONTAMINATED SOIL ZONE	05 SOIL pH
Unknown (ft)	5.0 (ft)	Unknown

06 NET PRECIPITATION	07 ONE YEAR 24 HOUR RAINFALL	08 SLOPE: SITE SLOPE	DIRECTION OF SITE SLOPE	TERRAIN AVERAGE SLOPE
1.75 (in)	3.5 (in)	0.5 %	West	0.5 %

09 FLOOD POTENTIAL: Unknown — SITE IS IN _____ YEAR FLOODPLAIN

10 ☑ SITE IS ON BARRIER ISLAND, COASTAL HIGH HAZARD AREA, RIVERINE FLOODWAY

11 DISTANCE TO WETLANDS (5 acre minimum)

ESTUARINE: A. _____ (mi)

OTHER: B. Coastal Wetlands 2-4.0 (mi)

12 DISTANCE TO CRITICAL HABITAT (of endangered species): There are no critical habitats of an endangered species in _____ (mi)

ENDANGERED SPECIES: Chatham County

13 LAND USE IN VICINITY

DISTANCE TO:

COMMERCIAL/INDUSTRIAL	RESIDENTIAL AREAS; NATIONAL/STATE PARKS, FORESTS, OR WILDLIFE RESERVES	AGRICULTURAL LANDS: PRIME AG LAND	AGRICULTURAL LANDS: AG LAND
A. < .25 (mi)	B. < .25 (mi)	C. > 1.0 (mi)	D. > 1.0 (mi)

14 DESCRIPTION OF SITE IN RELATION TO SURROUNDING TOPOGRAPHY

The site is bordered by heavily populated areas to the east, south, and southeast. The area to the north of the site is sparsely populated.

VII. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis, reports)

Georgia - EPD State Files; Jordan Sign Company
GAD003293057
Savannah, Georgia

EPA FORM 2070-13 (7-81)

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 6 - SAMPLE AND FIELD INFORMATION

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
GA	D003293057

II. SAMPLES TAKEN

SAMPLE TYPE	01 NUMBER OF SAMPLES TAKEN	02 SAMPLES SENT TO	03 ESTIMATED DATE RESULTS AVAILABLE
GROUNDWATER	2	Georgia - EPD Laboratory	10-18-88
SURFACE WATER			
WASTE			
AIR			
RUNOFF			
SPILL			
SOIL			
VEGETATION			
OTHER			

III. FIELD MEASUREMENTS TAKEN

01 TYPE	02 COMMENTS

IV. PHOTOGRAPHS AND MAPS

01 TYPE ☐ GROUND ☐ AERIAL

02 IN CUSTODY OF _____
(Name of organization or individual)

03 MAPS
☑ YES
☐ NO

04 LOCATION OF MAPS: Georgia EPD State Files

V. OTHER FIELD DATA COLLECTED (Provide narrative description)

N/A

VI. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis, reports)

Georgia - EPD State Files - Jordan Sign Company
GAD003293057
Savannah, Georgia

EPA FORM 2070-13 (7-81)

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 7 - OWNER INFORMATION

I. IDENTIFICATION
01 STATE: GA | 02 SITE NUMBER: D003293057

II. CURRENT OWNER(S)

01 NAME	02 D+B NUMBER	03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE	05 CITY	06 STATE	07 ZIP CODE
Reed Dulany		Southern States Phosphate and Fertilizer Company		P.O. Box 546 Savannah	Ga.	31498

PARENT COMPANY (If applicable)

08 NAME	09 D+B NUMBER	10 STREET ADDRESS (P.O. Box, RFD #, etc.)	11 SIC CODE	12 CITY	13 STATE	14 ZIP CODE
—						

III. PREVIOUS OWNER(S) (List most recent first)

01 NAME	02 D+B NUMBER	03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE	05 CITY	06 STATE	07 ZIP CODE
Mr. Hoyt D. Jordan		P.O. Box 1201		Savannah	Ga.	31402

IV. REALTY OWNER(S) (If applicable; list most recent first)

01 NAME	02 D+B NUMBER	03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE	05 CITY	06 STATE	07 ZIP CODE
—						

V. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis, reports)

Georgia - EPD State Files ; Jordan Sign Company
GAD003293057
Savannah, Georgia

EPA FORM 2070-13 (7-81)

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 8 - OPERATOR INFORMATION

I. IDENTIFICATION
01 STATE: GA | 02 SITE NUMBER: D003293057

II. CURRENT OPERATOR *(Provide if different from owner)*

01 NAME	02 D+B NUMBER
N/A	

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE

05 CITY	06 STATE	07 ZIP CODE

08 YEARS OF OPERATION	09 NAME OF OWNER

OPERATOR'S PARENT COMPANY *(If applicable)*

10 NAME	11 D+B NUMBER
N/A	

12 STREET ADDRESS (P.O. Box, RFD #, etc.)	13 SIC CODE

14 CITY	15 STATE	16 ZIP CODE

III. PREVIOUS OPERATOR(S) *(List most recent first; provide only if different from owner)*

01 NAME	02 D+B NUMBER
N/A	

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE

05 CITY	06 STATE	07 ZIP CODE

08 YEARS OF OPERATION	09 NAME OF OWNER DURING THIS PERIOD

PREVIOUS OPERATORS' PARENT COMPANIES *(If applicable)*

10 NAME	11 D+B NUMBER
N/A	

12 STREET ADDRESS (P.O. Box, RFD #, etc.)	13 SIC CODE

14 CITY	15 STATE	16 ZIP CODE

01 NAME	02 D+B NUMBER

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE

05 CITY	06 STATE	07 ZIP CODE

08 YEARS OF OPERATION	09 NAME OF OWNER DURING THIS PERIOD

10 NAME	11 D+B NUMBER

12 STREET ADDRESS (P.O. Box, RFD #, etc.)	13 SIC CODE

14 CITY	15 STATE	16 ZIP CODE

01 NAME	02 D+B NUMBER

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE

05 CITY	06 STATE	07 ZIP CODE

08 YEARS OF OPERATION	09 NAME OF OWNER DURING THIS PERIOD

10 NAME	11 D+B NUMBER

12 STREET ADDRESS (P.O. Box, RFD #, etc.)	13 SIC CODE

14 CITY	15 STATE	16 ZIP CODE

IV. SOURCES OF INFORMATION *(Cite specific references, e.g., state files, sample analysis, reports)*

Georgia - EPD State Files - Jordan Sign Company
GAD 003 293057
Savannah, Georgia

EPA FORM 2070-13 (7-81)

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 9 - GENERATOR/TRANSPORTER INFORMATION

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
GA	D003293057

II. ON-SITE GENERATOR

01 NAME	02 D+B NUMBER
N/A	
03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE
05 CITY	06 STATE / 07 ZIP CODE

III. OFF-SITE GENERATOR(S)

01 NAME	02 D+B NUMBER	01 NAME	02 D+B NUMBER
N/A			
03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE	03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE
05 CITY	06 STATE / 07 ZIP CODE	05 CITY	06 STATE / 07 ZIP CODE
01 NAME	02 D+B NUMBER	01 NAME	02 D+B NUMBER
03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE	03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE
05 CITY	06 STATE / 07 ZIP CODE	05 CITY	06 STATE / 07 ZIP CODE

IV. TRANSPORTER(S)

01 NAME	02 D+B NUMBER	01 NAME	02 D+B NUMBER
N/A			
03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE	03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE
05 CITY	06 STATE / 07 ZIP CODE	05 CITY	06 STATE / 07 ZIP CODE
01 NAME	02 D+B NUMBER	01 NAME	02 D+B NUMBER
03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE	03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE
05 CITY	06 STATE / 07 ZIP CODE	05 CITY	06 STATE / 07 ZIP CODE

V. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis, reports)

EPA FORM 2070-13 (7-81)

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 10 - PAST RESPONSE ACTIVITIES

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
GA	D003293057

II. PAST RESPONSE ACTIVITIES

01 ☐ A. WATER SUPPLY CLOSED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ B. TEMPORARY WATER SUPPLY PROVIDED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ C. PERMANENT WATER SUPPLY PROVIDED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ D. SPILLED MATERIAL REMOVED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ E. CONTAMINATED SOIL REMOVED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ F. WASTE REPACKAGED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ G. WASTE DISPOSED ELSEWHERE — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ H. ON SITE BURIAL — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ I. IN SITU CHEMICAL TREATMENT — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ J. IN SITU BIOLOGICAL TREATMENT — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ K. IN SITU PHYSICAL TREATMENT — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ L. ENCAPSULATION — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ M. EMERGENCY WASTE TREATMENT — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ N. CUTOFF WALLS — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ O. EMERGENCY DIKING/SURFACE WATER DIVERSION — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ P. CUTOFF TRENCHES/SUMP — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ Q. SUBSURFACE CUTOFF WALL — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 10 - PAST RESPONSE ACTIVITIES

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
GA	D003293057

II PAST RESPONSE ACTIVITIES *(Continued)*

01 ☐ R. BARRIER WALLS CONSTRUCTED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ S. CAPPING/COVERING — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ T. BULK TANKAGE REPAIRED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ U. GROUT CURTAIN CONSTRUCTED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ V. BOTTOM SEALED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ W. GAS CONTROL — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ X. FIRE CONTROL — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ Y. LEACHATE TREATMENT — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ Z. AREA EVACUATED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ 1. ACCESS TO SITE RESTRICTED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ 2. POPULATION RELOCATED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ 3. OTHER REMEDIAL ACTIVITIES — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

III. SOURCES OF INFORMATION *(Cite specific references, e.g., state files, sample analysis, reports)*

EPA FORM 2070-13 (7-81)

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 11 - ENFORCEMENT INFORMATION

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
GA	D003293057

II. ENFORCEMENT INFORMATION

01 PAST REGULATORY/ENFORCEMENT ACTION ☐ YES ☒ NO

02 DESCRIPTION OF FEDERAL, STATE, LOCAL REGULATORY/ENFORCEMENT ACTION

III. SOURCES OF INFORMATION *(Cite specific references, e.g., state files, sample analysis, reports)*

Georgia-EPD ~~State~~ Files - Jordan Sign Company
GAD003293057
Savannah, Georgia

EPA FORM 2070-13 (7-81)

RECONNAISSANCE CHECKLIST FOR HRS2 CONCERNS

Instructions: Obtain as much "up front" information as possible prior to conducting fieldwork. Complete the form in as much detail as you can, providing attachments as necessary. Cite the source for all information obtained.

Site name: Rheem Manufacturing
City, County, State: Savannah, Chatham County, GA
EPA ID No.: GAD051033728
Person responsible for form: John A. McKeown
Date: April 11, 1988

Air Pathway

Describe any potential air emission sources onsite: N/A

Identify any sensitive environments within 4 miles: Marshlands

Identify the maximally exposed individual (nearest residence or regularly occupied building - workers do count): Mr. E.H. Hammock
347 Highway 17
Savannah, GA

Groundwater Pathway

Identify any areas of karst terrain: N/A

Identify additional population due to consideration of wells completed in overlying aquifers to the AOC: All aquifers are interconnected.

Do significant targets exist between 3 and 4 miles from the site? yes.
The Hayes school is one of many schools in the area - 1 mile SW of facility. 1st Baptist Church of Garden C
½ mile N.
Is the AOC a sole source aquifer according to Safe Drinking Water Act? (i.e. is the site located in Dade, Broward, Volusia, Putnam, or Flager County, Florida) yes, all aquifers in this area are connected.

Surface Water Pathway

Are there intakes located on the extended 15-mile migration pathway? No.

Are there recreational areas, sensitive environments, or human food chain targets (fisheries) along the extended pathway? Yes, the Savannah River is used by Sportsmen and fisheries alike. The extended pathway passes many small parks and waterfront area.

Onsite Exposure Pathway

Is there waste or contaminated soil onsite at 2 feet below land surface or higher?
Possibly

Is the site accessible to non-employees (workers do not count)?
Not readily accessible by any means.

Are there residences, schools, or daycare centers onsite or in close proximity?
Yes, multifamily residences, schools and daycare centers are all within one mile of site.

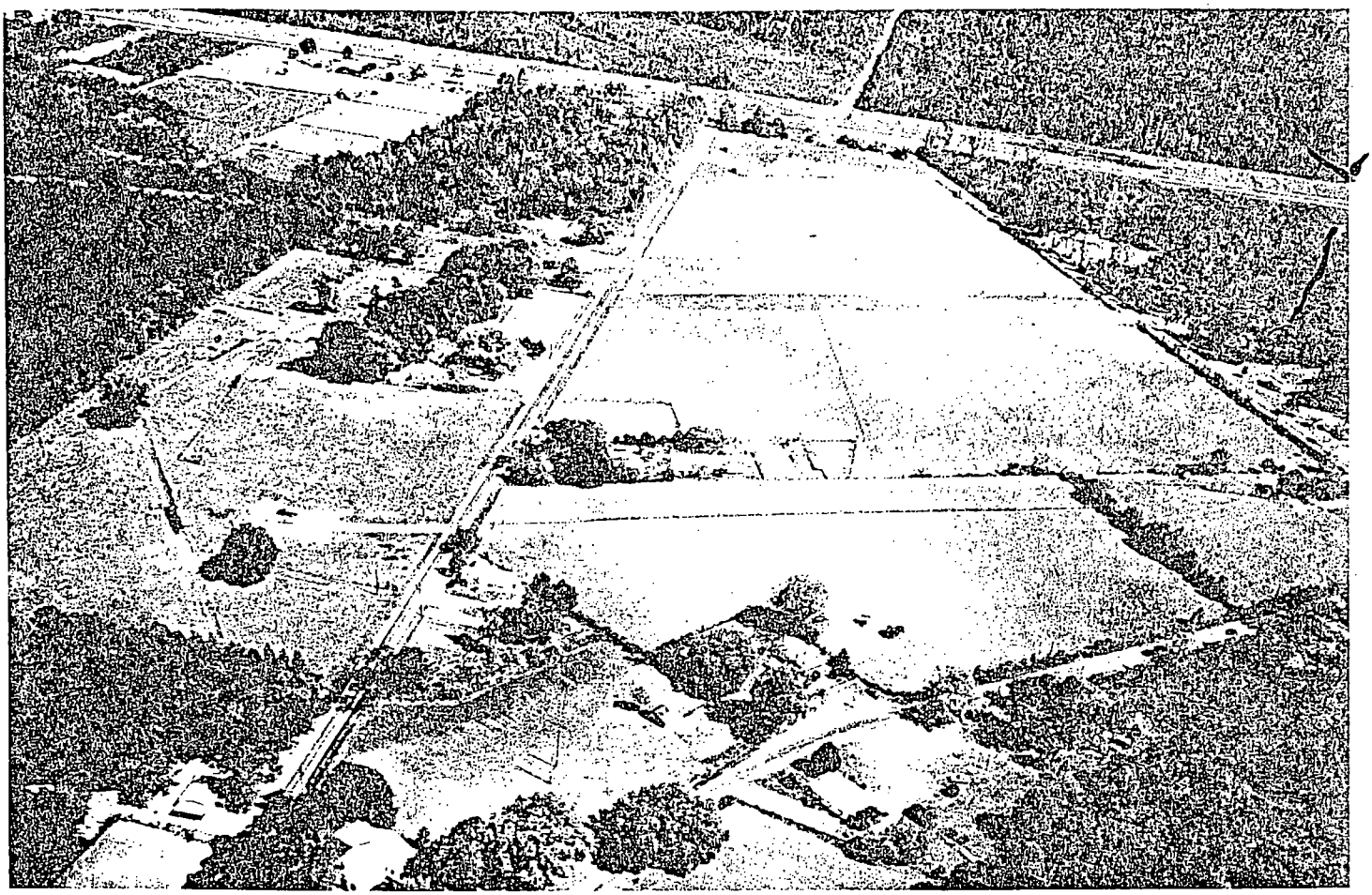
Are there barriers to travel (e.g., a river) within one mile?
Yes - The Savannah River is just over a mile away.

Haynes School - 1 mile S

REF 6.
page 1 of 5

SOIL SURVEY OF

Bryan and Chatham Counties, Georgia



United States Department of Agriculture
Soil Conservation Service
In cooperation with
University of Georgia, College of Agriculture
Agricultural Experiment Stations

Issued March 1974

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Contents

Issued March 1974

SOIL SURVEY OF BRYAN AND CHATHAM COUNTIES, GEORGIA

BY ROBERT L. WILKES, J. H. JOHNSON, H. T. STONER, AND D. D. BACON, SOIL CONSERVATION SERVICE

UNITED STATES DEPARTMENT OF AGRICULTURE, SOIL CONSERVATION SERVICE, IN COOPERATION WITH THE UNIVERSITY OF GEORGIA, COLLEGE OF AGRICULTURE, AGRICULTURAL EXPERIMENT STATIONS

BRYAN AND CHATHAM COUNTIES are in the eastern corner of Georgia (fig. 1), within the Atlantic Coast Flatwoods section of the State. The counties adjoin and have a total land area of 880 square miles or 563,200 acres. Bryan County has a land area of 439 square miles, or 280,960 acres, and Chatham County has a land area of 441 square miles, or 282,240 acres. The Savannah River forms the northeastern boundary of Chatham County, and the Atlantic Ocean forms the eastern boundary. Bryan and Chatham Counties are separated by the Ogeechee River. Savannah is the population center for the eastern part of the State and is an important seaport for the Southeast.

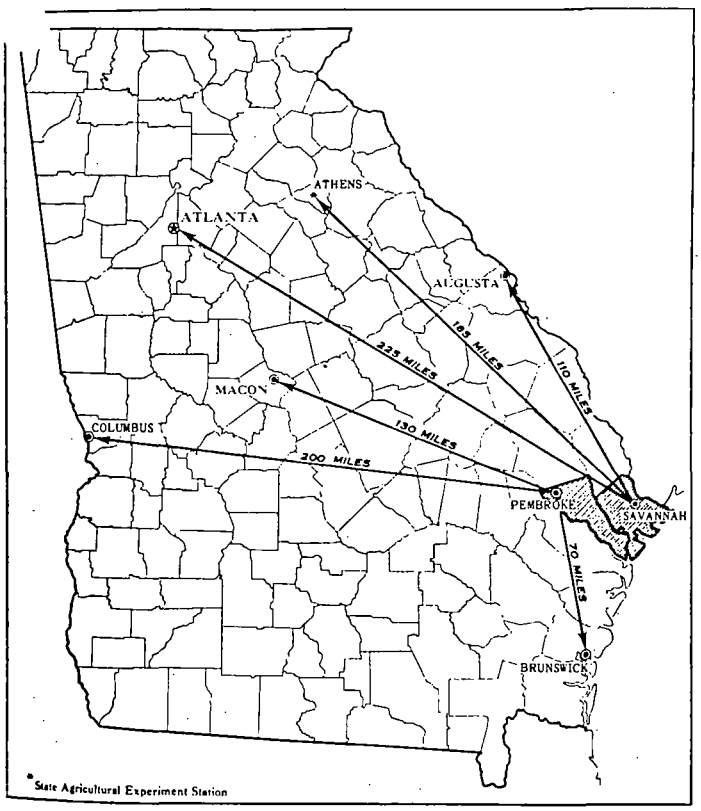


Figure 1. Location of Bryan and Chatham Counties in Georgia.

A group of English under General James Oglethorpe settled in Savannah in 1733. Migration moved westward after the coastal area was settled. According to the U.S. Bureau of Census, in 1960 the population of Chatham County was 188,299 and Bryan County was 6,226. Savannah, Chatham County seat, had a population of 149,245. The county seat of Bryan County is Pembroke and its 1960 population was 1,450. The population in cities and towns is increasing, but the farm population is decreasing. In 1959, the average size of farms in Bryan County was about 204 acres and in Chatham County it was about 258 acres. In 1964 the average size of farms was about 233 acres in Bryan County and 207 acres in Chatham County. In that year about 12.5 percent of Bryan County was in farms and about 17 percent of Chatham County.

The major soils chiefly have a sandy surface layer over a loamy or sandy subsoil or underlying layers. These soils are mainly nearly level or gently sloping and occur as broad, smooth areas drained by wet depressions. They generally are seasonally wet or almost always wet, except for the better drained soils on the slight ridges and dunelike relief. A band of marshland parallels the coastline and extends inland along the major streams. Marshland makes up about 22 percent of the total acreage of these two counties.

About 65 percent of the survey area is in woodland and is held in large tracts by pulp and paper companies and the Fort Stewart Military Reservation. The warm humid climate and high water table promote rapid tree growth. The wood products harvested from the forest and the many industries around Savannah are the chief sources of income.

Local markets are available for all locally and regionally produced crops.

How This Survey Was Made

Soil scientists made this survey to learn what kinds of soil are in Bryan and Chatham Counties, where they are located, and how they can be used. The soil scientists went into the counties knowing they likely would find many soils they had already seen and perhaps some they had not. They observed the steepness, length, and shape of slopes, the size and speed of streams, the kinds of native

REF. 6
page 4 of 5

TABLE 8.—*Estimated acre yields of the principal crops and pasture plants grown under a high level of management*

[Yields are for nonirrigated soils. Absence of yield means that the crop is not suited to the soil or generally is not grown on it]

Soil	Corn	Cotton lint	Tobacco	Soybeans	Peanuts	Small grain pasture	Coastal bermudagrass		Bahiagrass pasture
							Hay	Pasture	
	Bu.	*Lb.*	*Lb.*	*Bu.*	*Lb.*	*A-U-M*[1]	*Tons*	*A-U-M*[1]	*A-U-M*[1]
Albany fine sand	65		2,000	25	1,500	3	4.5	7.5	6.5
Angelina and Bibb soils, frequently flooded									3.5
Cape Fear soils									4.5
Chipley fine sand	55		2,000	20		3	4.5	7.5	6.5
Craven loamy fine sand	75			35		3	3.5	5.8	6.0
Dothan loamy sand	85	625	2,200	40	2,000	3	5.5	9.2	8.0
Ellabelle loamy sand									5.0
Fuquay loamy sand	80	500	2,300	30	2,900	3	4.5	7.5	6.5
Johnston loam									3.5
Lakeland sand	55		1,400	20		2	3.5	5.8	4.5
Leon fine sand	50								4.5
Lucy loamy sand, 5 to 12 percent slopes	60			30	1,800	3	4.0	6.7	6.5
Lynn Haven sand	50					3			3.0
Mascotte sand	50								4.5
Meggett loam									4.5
Ocilla complex	65			30		3	4.5	7.5	7.0
Ogeechee loamy fine sand	65					3			5
Olustee fine sand	70		2,200	25		3	4.5	7.5	5
Osier fine sand									5
Pelham loamy sand	70					3		4.0	5.5
Pooler fine sandy loam							4	6.7	5.5
Stilson loamy sand	80		2,400	30	2,200	3.5	5.5	9.2	7.0
Wahee sandy loam	80			35		3	4	6.7	5.5

[1] Animal-unit-month. This term is used to express the carrying capacity of pasture. It is the number of animal units (1 cow, steer, or horse; 5 hogs; or 7 sheep or goats) that can graze a pasture for 1 month without injury to the sod. An acre of pasture that provides 2.5 months of grazing for 2 cows, for example, has a carrying capacity of 5 animal-unit-months.

The older areas more than 40 feet above sea level have been somewhat eroded, and the land features showing marine influences are not so distinct as in the lower areas. The soils at the higher elevation are similar in both chemical and mineralogical composition to those of lower areas, and geological erosion has exposed older deposits to the soil-forming processes. Lucy and Dothan soils developed from older exposed sediments.

The Angelina, Bibb, and Johnston soils formed in recent alluvium that washed from the Coastal Plain and was deposited by the larger streams. These materials are mixed sand and clay and are within the stream flood plain.

A series of sand ridges are on the northeast side of the Ogeechee and Canoochee Rivers and on the present barrier islands. These ridges are quartz sand probably deposited by wind. Kershaw soils formed in this sand.

Climate

Climate affects the formation of soils through its influence on the rate of weathering of rocks and on the decomposition of minerals and organic matter. It also affects biological activity in the soils and the leaching and movement of weathered materials through the soils.

Bryan and Chatham Counties have a warm, moist climate. The average annual temperature is about 66° F. The temperature averages about 51° in January and about 81° in July. The average annual rainfall is between 45 and 50 inches. The warm, moist climate promotes decomposition of organic matter almost the year round, and only where the soils are waterlogged do appreciable amounts of organic matter accumulate. The abundant rainfall removes calcium, magnesium, and other basic elements and replaces these cations with hydrogen. As a result, hydrogen is the dominant cation and makes most of the soils highly acid in reaction. Also, the movement of water through the soil translocates other soluble material and colloidal matter into the lower layers. The result is that the soils in Bryan and Chatham Counties have chiefly a sandy surface layer over clay-enriched layers. Exceptions are the Kershaw, Lakeland, and Chipley soils, which formed in quartz sand.

Relief

Relief, or the differences in elevation, influences soil formation through its effect on drainage, runoff, erosion, and percolation of both water and air through the soils.

Precipitation is not absorbed by the soil where the rainfall rate is faster than the infiltration rate or where the soil is already saturated with free water. Low-lying areas stay wet for extended periods. When a soil is wet, decomposition of plant tissue is retarded. Consequently, more organic matter accumulates in the surface layer of poorly drained and very poorly drained soils than in better drained soils. Because relief is low throughout most

R-49

of the survey area, the soils in about 60 percent of the age are poorly drained or very poorly drained.

The greatest differences in relief in the survey area occur in Bryan County west of the Ogeechee River and north of the Canoochee River. Elevation increases from about 30 feet to about 80 feet above sea level within a mile, and the slopes are steep enough for geological erosion to lower the streams well below the general land surface. Most of the well-drained soils occur in this part of the survey area.

In saturated soils, movement of air is restricted and the oxygen content is lower than in well-drained soils. Oxygen is removed from some of the iron and aluminum compounds of the subsoil, causing gray mottles or dominant gray colors in the B horizon. This explains why the Pelham, Ellabelle, and other poorly drained and very poorly drained soils have dominant gray colors just below the surface layer, why the Ocilla and other somewhat poorly drained soils have gray mottles in the upper part of the B horizon, and why the Fuquay and other well-drained soils have uniform yellow to red colors free of gray mottles to a depth of at least 3 to 4 feet.

Plants and animals

Plants, animals, bacteria, and other organisms are active in the soil-forming processes. The changes they bring about depend mainly on the kinds of life processes peculiar to each. Plants furnish most of the organic matter available to the soil. Grass-type vegetation returns to the soil most of the plant tissue produced each year. Forest vegetation, however, returns only part of the ıe in the form of leaves. Organic matter accumulates mainly in the surface layer.

In about 75 percent of the acreage of the survey area, the soils formed under forest vegetation. The organic matter produced under forest is enough to give the surface layer a dark color and an organic-matter content of about 1 to 3 percent. It is not enough to add appreciable amounts of organic matter to the surface layer except where excess water slows decomposition. If waterlogged, the surface layer has higher organic-matter content and is darker and thicker than it is in drier areas. The uprooting of trees by wind also affects the formation of soils through the mixing of soil layers.

About 25 percent of the survey area has marsh or grass-type vegetation, and the surface layer is higher in organic-matter content than in forested areas. The surface layer in marsh soils contains as much as 15 percent organic matter in some places.

Small animals, earthworms, insects, and microorganisms influence the formation of soils by mixing organic matter into the soil and by helping to break down plant residue. Small animals burrow into the soil and mix the layers. Earthworms and other small invertebrates feed on the organic matter in the upper few inches. They slowly but continually mix the soil material and may alter it chemically. Bacteria, fungi, and other micro-organisms hasten the decomposition of organic matter and the weathering of minerals.

Time

ıe alteration of soil materials so that deep, distinct layers develop in the soil requires time. The length of time that geologic materials have remained in place is commonly reflected in the distinctness and thickness of the horizons in the soil profile.

Craven soils formed in parent material that is less than 35 feet above sea level and have distinct layers. Dothan soils formed from geologically older parent material that is more than about 70 feet above sea level. They have had more time to form and their clay-enriched layers are thicker than those in the Craven soils. Also, Dothan soils have concentrations of oxides in the form of concretions and soft plinthite.

The parent material of Angelina and Bibb soils has been recently deposited by streams. These soils lack distinct genetic layers because the soil-forming processes have not had time to alter the parent material appreciably since it was deposited.

The sandy soils that formed in homogeneous deposits of quartz sand typically lack distinct genetic layers because quartz sand resists alteration by the soil-forming processes.

Classification of the Soils

Classification consists of an orderly grouping of soils according to a system designed to make it easier to remember soil characteristics and interrelationships. Classification is useful in organizing and applying the results of experience and research. Soils are placed in narrow classes for discussion in detailed soil surveys and for application of knowledge within farms and fields. The many thousands of narrow classes are then grouped into progressively fewer and broader classes in successively higher categories so that information can be applied to large geographic areas.

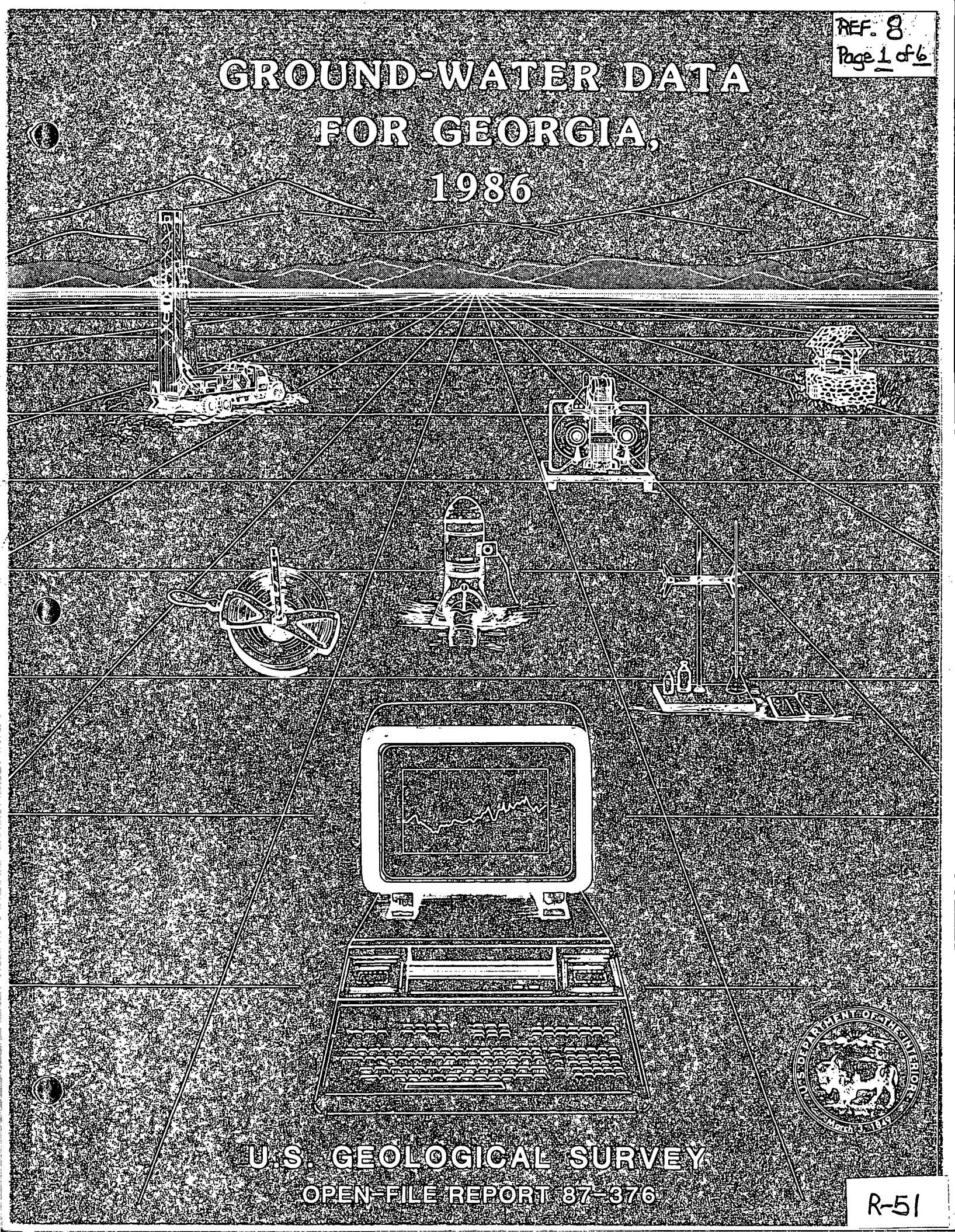
Two systems of classifying soils have been used in the United States in recent years. The older system was adopted in 1938 (*3*) and revised later (*8*). The system currently used by the National Cooperative Soil Survey was developed early in the sixties (*7*) and adopted in 1965 (*10*). It is under continual study.

The current system of classification has six categories. Beginning with the most inclusive, these categories are the order, the suborder, the great group, the subgroup, the family, and the series. The criteria for classification are soil properties that are observable or measurable, but the properties are selected so that soils of similar genesis are grouped together. The placement of some soil series in the current system of classification, particularly in families, may change as more precise information becomes available.

Table 9 shows the classification of each soil series of Bryan and Chatham Counties by family, subgroup, and order, according to the current system. The six classes in the current system are defined in the paragraphs that follow.

ORDER: Ten soil orders are recognized in the current system. They are Entisols, Vertisols, Inceptisols, Aridisols, Mollisols, Spodosols, Alfisols, Ultisols, Oxisols, and Histosols. The properties used to differentiate the soil order are those that tend to give broad climatic groupings of soils. The exceptions, Entisols and Histosols, occur in many different climates. Five soil orders are represented in Bryan and Chatham Counties—Entisols, Inceptisols, Spodosols, Alfisols, and Ultisols.

GROUND-WATER DATA FOR GEORGIA, 1986



U.S. GEOLOGICAL SURVEY

OPEN-FILE REPORT 87-376

GROUND-WATER DATA FOR GEORGIA, 1986

By J.S. Clarke, S.A. Longsworth, C.N. Joiner,
M.F. Peck, K.W. McFadden, and B.J. Milby

Open-File Report 87-376

Prepared in cooperation with the

GEORGIA DEPARTMENT OF NATURAL RESOURCES
ENVIRONMENTAL PROTECTION DIVISION
GEORGIA GEOLOGIC SURVEY

Doraville, Georgia

1987

2.3 Water-Table Aquifers

Shallow water-table aquifers are used for domestic and stock supplies in most areas of Georgia. In the Piedmont and Blue Ridge provinces the aquifers consist of residual soils derived from weathering of crystalline rocks. In the southwestern part of the Coastal Plain province, the aquifers consist of undifferentiated sand, clay, and limestone ranging in thickness from less than 10 feet to about 125 feet (Hayes and others, 1983). Water-table aquifers in the Savannah area consist of sand, silt, and clay containing some shell and gravel beds.

Water-level fluctuations in these aquifers are caused mainly by changes in precipitation. Water levels generally rise rapidly during wet periods and decline slowly during dry periods. Prolonged droughts may cause water levels, particularly on hill tops and steep slopes, to decline below pump intakes in dug, bored, or shallow drilled wells and result in temporary well failures. Generally, the well yields are restored with the return of precipitation.

The mean water levels in four wells tapping shallow water-table aquifers were from 2.7 feet higher to 2.5 feet lower in 1986 than in 1985. During 1986, the mean water level in well 11AA01 in Spalding County in the Piedmont province was about 2.5 feet lower than in 1985. As a result of below-normal rainfall, a new record low was measured in November that was slightly lower than the previous record low measured in December 1981. Above-normal rainfall in late November and December caused the water level to recover about 4 feet from the record low measured in early November.

In the southwestern part of the Coastal Plain province (Dougherty Plain), the mean water levels in wells 13M007 in Worth County and 07H003 in Miller County were about the same in 1986 as in 1985. In the Coastal Plain province near Savannah, the mean water level in well 35P094 was about 2.7 feet higher in 1986 than in 1985. The annual minimum water levels in wells 07H003, 13M007, and 35P094 were from 0.9 foot to 6.1 feet higher than the record lows set in November 1981, October 1981, and November 1972, respectively. By the end of 1986, the water level in well 07H003 had recovered about 8.5 feet from the low measured in November; in well 13M007 the water level had recovered about 4.7 feet from the low measured in November; and in well 35P094 the water level had recovered about 6.9 feet from the low measured in August.

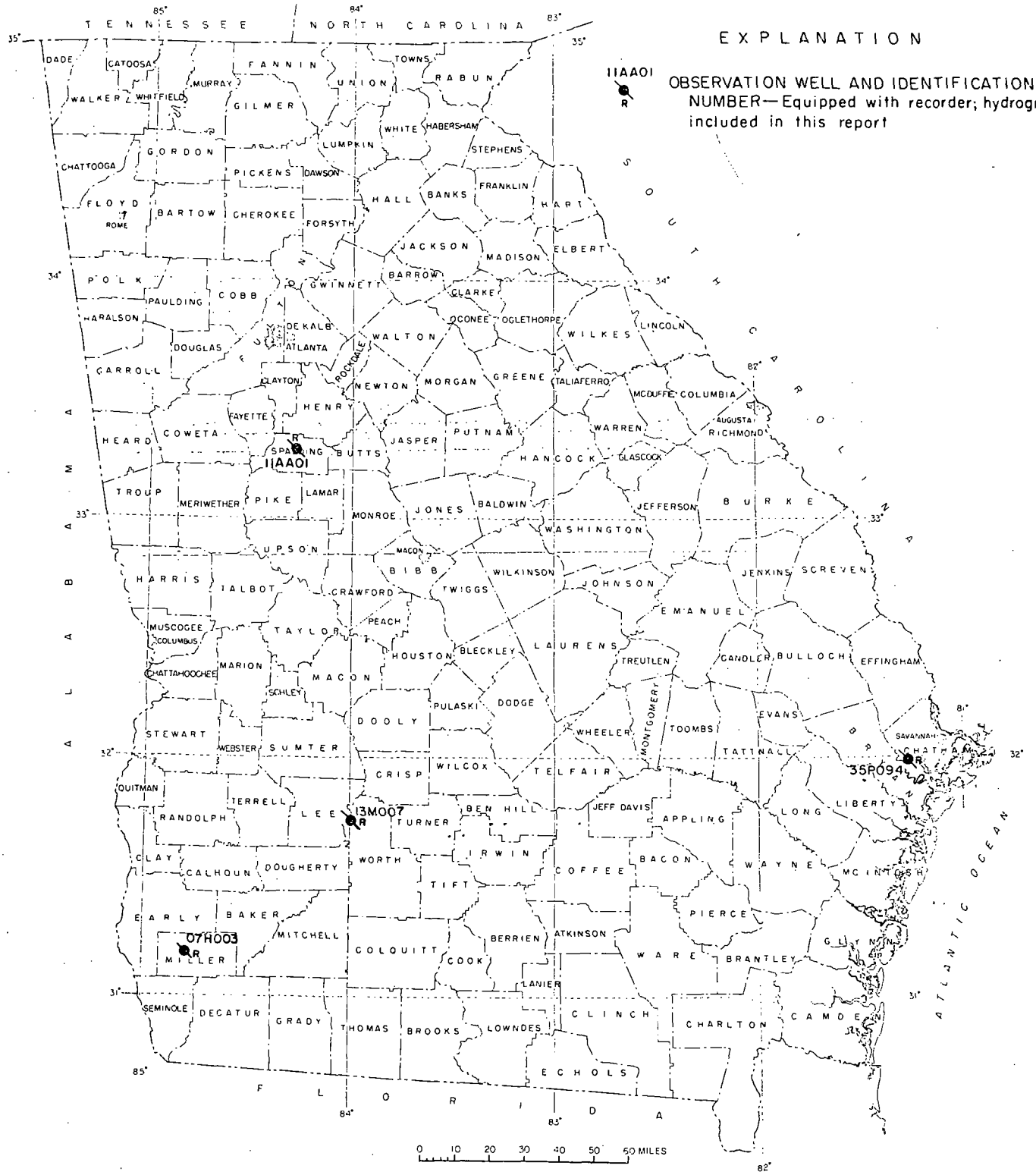


Figure 2.3-1.— Locations of observation wells in the water-table aquifers.

2.7.4.1 Savannah area

The water level in the Upper Floridan aquifer in the Savannah area is affected by pumpage for municipal and industrial use that, in 1986, exceeded 73 Mgal/d. As a result of this pumping, a cone of depression has developed in the potentiometric surface around Savannah. Hydrographs for observation wells near the center of pumping and in outlying areas illustrate the effects of pumping on the ground-water level.

During 1986, the mean water levels in four wells in the Savannah area were from 1.4 to 3.0 feet lower than in 1985. These declines continued a downward trend of water levels that began in 1983. Away from the center of pumping at Savannah, new record lows were measured in three wells during July and August. These new record lows were from 2.9 to 4.9 feet lower than the previous record lows measured in the summer of 1985 and the fall of 1980. Although the mean water level in well 36Q008, located near the center of pumping, was 3.0 feet lower in 1986 than in 1985, the annual minimum water level was 2.4 feet higher than the record low measured in August 1980. By the end of 1986, the water levels in the four wells had recovered 4.9 to 12.9 feet from the summer lows, but remained below the previous year-end levels.

Observation well 32R002, located west of the pumping center at Savannah, also responds to changes in pumping at Savannah, but less so than wells in the cone of depression. During 1986, the mean water level in the well was 1.6 feet lower than in 1985. This decline continued a downward trend since 1983. A new record low was measured in August that was 2.2 feet lower than the previous record measured in July 1985. By the end of 1986, the water level in both wells had recovered somewhat but remained below the previous year-end levels.

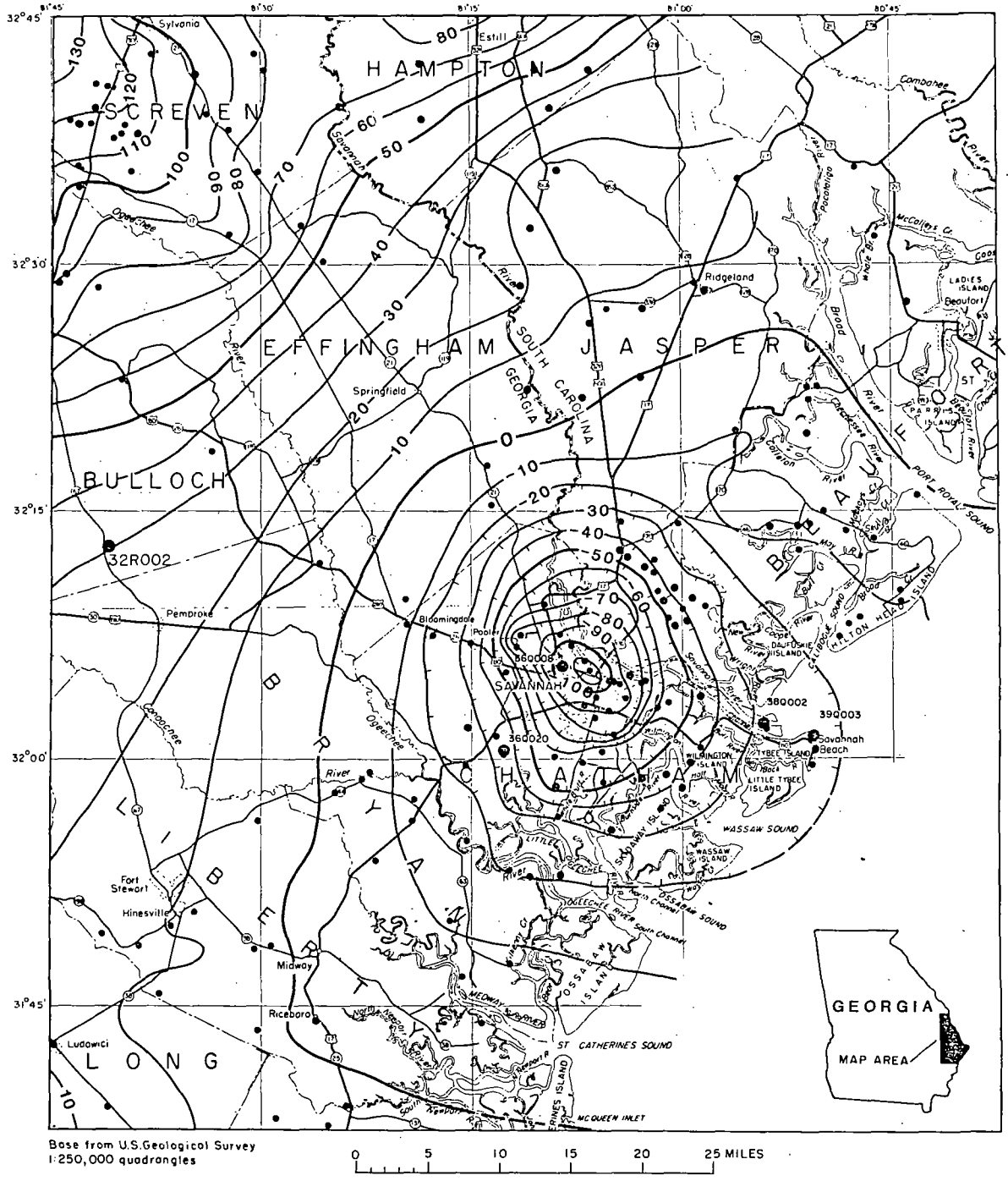


Figure 2.7.4.1-1.—Observation well locations and the water level in the Upper Floridan aquifer in the Savannah area, May 1985.

REF. 9
page 1 of 13

Salt-Water Encroachment Geology and Ground-Water Resources of Savannah Area Georgia and South Carolina

GEOLOGICAL SURVEY WATER-SUPPLY PAPER 1611

Prepared in cooperation with the Georgia Department of Mines, Mining and Geology, the city of Savannah, and Chatham County, Georgia

R-57

REF. 9
page 1 of 13

Salt-Water Encroachment Geology and Ground-Water Resources of Savannah Area Georgia and South Carolina

By HARLAN B. COUNTS *and* ELLIS DONSKY

GEOLOGICAL SURVEY WATER-SUPPLY PAPER 1611

Prepared in cooperation with the Georgia Department of Mines, Mining and Geology, the city of Savannah, and Chatham County, Georgia

UNITED STATES GOVERNMENT PRINTING OFFICE, WASHINGTON : 1963

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APPENDIX C

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The Gulf and Atlantic Plains are similar in many respects, but there are also differences, of which the most striking feature is that the Atlantic Plain, excluding the Florida Peninsula, is much narrower than the Gulf Plain. The average width is about 200 miles for both the submerged part and the emerged part. In contrast the Gulf Plain is about 500 miles wide from its inner margin, the Fall Zone, to the outer edge of the Continental Shelf.

The seaward slope of the Coastal Plain is only slightly interrupted by features of the coastal terraces and the present shore. From the Fall Zone near Augusta at an approximate altitude of 450 feet and on a line southeastward through Savannah, the relief is about 450 feet in 125 miles. The gradient of the land surface averages about 3.6 feet per mile, about the same as that of the Continental Shelf. The coastal terraces generally are flatter and their gradients, which are about 1.5 feet per mile, are similar in magnitude to the flattest part of the Continental Shelf.

The Savannah area is drained by two major rivers and many small streams and estuaries. The two major rivers, the Savannah and Ogeechee, generally cross the coastal terraces at right angles and pass through the Savannah area from northwest to southeast and empty into the Atlantic Ocean. (See pl. 1.)

THE CONTINENTAL SHELF

The Continental Shelf is the submerged part of the continent and is the continuation, beneath the sea, of the Atlantic Plain. The inner edge of the Continental Shelf is arbitrarily drawn at the present coastal beaches. The outer edge of the Continental Shelf usually is defined as the 100 fathom line (600 ft below mean sea level). At 600 feet the slope increases markedly, and this increase in slope marks the edge of the continent. A notable exception to this exists in the region extending from Cape Hatteras, N.C., to eastern Florida where the steep slope begins at a depth of about 50 fathoms, or 300 feet. The Continental Shelf varies in width, but near the Savannah area it is about 85 miles wide.

From the coast to the outer edge of the Continental Shelf the overall average gradient is about 3.5 feet per mile. However from the shore to 1 or 2 miles offshore the gradient is greater, about 30 feet per mile. The slope between 10 and 20 fathoms (60 and 120 ft) is about 2 feet per mile, and from 20 to 50 fathoms (120 to 300 ft) gradients average 3.5 feet per mile.

CLIMATE

The climate of the Savannah area is characterized by mild temperatures and abundant rainfall. Winters usually are short and

mild, but include occasional cold periods of a few days duration. Summers commonly are long and hot; maximum temperatures range from 95° to 100°F during July and August. According to the U.S. Weather Bureau, the average annual precipitation recorded at Savannah for the period 1874 to 1958 is 45.75 inches, and the average annual temperature for the period 1874 to 1958 is 66.4°F. Rainfall usually is well distributed for agricultural needs, and the largest amounts occur during the spring and summer. The distribution of the average monthly precipitation and temperature at Savannah is given below:

Month	1874–1958	
	Precipitation (inches)	Temperature (°F)
January	2.45	51.6
February	2.82	53.4
March	3.49	58.7
April	2.47	65.7
May	2.91	72.9
June	5.17	79.0
July	7.09	81.2
August	6.25	80.4
September	6.50	76.7
October	2.45	67.0
November	1.51	57.5
December	2.64	51.7

The average frost-free growing season is 273 days; the average date for the last freeze in spring is February 26 and for the first freeze in fall is November 26.

CULTURAL DEVELOPMENT

The population of the area outside of Chatham County has decreased slightly from 1940 to 1950. The 1950 population for the counties covered by this investigation is listed as follows:

County	Total area (sq mi)	Population (rounded)	
		Total (1950)	Average (per sq mi)
Beaufort, S.C.	672	27,000	40
Bryan, Ga.	439	6,000	14
Chatham, Ga.	441	[1] 193,000	400
Effingham, Ga.	480	9,000	19
Jasper, S.C.	578	11,000	19
Liberty, Ga.	510	8,000	17
	3,120	254,000	

[1] Estimate of July 1, 1958 by the Georgia Department of Health.

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and where they are absent, it overlies rocks of Paleocene age. The Tallahatta is in turn overlain by the Lisbon formation of middle Eocene age.

Character, distribution, and thickness.—Although the Tallahatta formation has been noted in only six wells, the distribution of these wells suggests that the Tallahatta underlies most of the Savannah area. The formation consists of limestone and marl. Generally, the lower part of the formation is limestone and top is marl. The limestone is cream colored, granular, and somewhat loosely consolidated; it contains clay, phosphatic minerals, and chert. Coarse glauconite is abundant in the lower part of the limestone section. In the southern part of the area, the Tallahatta is 250 feet thick (1,430–1,680 ft) in well LIB–185 and 200 feet thick (955–1,155 ft) in well CHA–357. Farther north, in well PI–2, only 53 feet (1,017–1,070 ft) of Tallahatta is present and it consists of thin stringers of limestone interbedded with soft, sandy, cream-colored, cherty marl.

Water-bearing properties.—The Tallahatta formation is not a source of water for domestic, municipal, or industrial purposes in the Savannah area because its fine-grained materials yield only small amounts of water and the water is mineralized. The formation is important hydrologically because it forms part of the lower confining layer for the principal artesian aquifer.

LISBON FORMATION

The Lisbon formation occurs only in the subsurface in the Savannah area. In this report it is considered to be equivalent in age to the McBean formation which occurs in updip exposures. It conformably overlies the Tallahatta formation of Claiborne age and is conformably overlain by the Gosport sand of Claiborne age.

Character, distribution, and thickness.—In outcrops the Lisbon (McBean) formation consists of fine- to medium-grained, locally indurated, glauconitic sand interbedded with thin beds of gray, sandy, fossiliferous clay containing hard lime nodules. However, in the subsurface in the Savannah area, the Lisbon formation is mostly a soft, white or gray to cream-colored limestone. Lithologically it is somewhat difficult to differentiate from formations above and below. It is rather massive in some parts of the area, being highly calcitized. In well CHA–452 solid cores of material described as Lisbon are composed mostly of fragments, casts and molds of macrofossils, echinoid and bryozoan remains, and some Foraminifera. The limey pieces are cemented by calcium carbonate. The resulting rock, although generally soft or easily broken, is dense and massive in appearance. In some intervals the occurrence of coarse grains of glauconite slightly changes the color of the rock

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to pale green. The presence of dolomitic limestone modifies the color to shades of yellow and tan. East of a line between Port Wentworth and Union Bag-Camp Corp. in Savannah the formation contains less limestone and more silt, clay, and marl, and its permeability is lessened.

The Lisbon formation is recorded in all parts of the area from wells penetrating middle Eocene strata.

Water-bearing properties.—In and near the outcrop area the Lisbon yields sufficient water for rural, domestic, and municipal supplies. Downdip, in Screven and Effingham Counties, the Lisbon is reached at greater depths, and its water-bearing characteristics in this area are unknown. Still farther downdip, in western Chatham County, the Lisbon formation in part forms the lowest part of the principal artesian aquifer. In the easternmost part of the area, however, the Lisbon is not considered part of the principal artesian aquifer because of the previously mentioned lithologic changes. Along the coast the Lisbon acts as a barrier to the movement of water and is considered to be part of the lower confining layer.

Base of principal artesian aquifer.—The fence diagram (pl. 2) shows the extent and thickness of the Lisbon formation, and the geologic section *A–A′*, plate 3, illustrates how the bottom of the principal artesian aquifer rises eastward, cutting across time lines because of a facies change in the sediments. In the vicinity of Savannah the upper boundary of the lower confining layer is about the middle of the Lisbon formation at an approximate depth of 850 feet, but along the coast the upper boundary of the lower confining layer and the top of the Lisbon coincide, generally at a depth of about 700 feet.

The bottom of the principal aquifer is in part determined by the chemical content of the water, which increases with depth to the east and northeast. No line or limit can be set as to the depth at which "good" water is available, but an unusably high chloride content will determine the lower limit for developing water. For example, in well BFT–101 on Hilton Head Island, S.C., water with a chloride content of 368 ppm was recovered from a well point isolated at 543 feet. The bottom of the aquifer extends to a depth of approximately 700 feet in this vicinity, but the lower part of the aquifer, below about 500 feet, contains water high in chloride and cannot be regarded as a source of usable water for normal purposes.

GOSPORT SAND

The Gosport sand of middle Eocene age is the uppermost formation of Claiborne age. It is exposed only at a few localities in central Georgia. In the Savannah area, it is entirely in the subsur-

face. The Lisbon formation of Claiborne age lies conformably beneath the Gosport. In most parts of the Savannah area, the Gosport is conformably overlain by the Ocala limestone of Jackson age; where the Ocala is missing the Gosport is overlain unconformably by rocks of Oligocene age and younger.

Character, distribution, and thickness.—The Gosport sand is predominantly sand only in some updip surface and subsurface locations. In some of the deep wells in the Savannah area, the Gosport sand is composed of cream-colored and white to gray dense sandy fossiliferous limestone and pale-green coarsely glauconitic marl.

The extent and thickness of the Gosport in the Savannah area are shown on plate 2. It is not shown in well LIB–185, although it may be included in the bottom 240 feet of the Ocala limestone of late Eocene age. Approximately 400 feet (80–480 ft), the thickest section of Gosport recorded in the area thus far, was penetrated in well HAM–30.

Water-bearing properties.—In general, the Gosport is water bearing and the quality of water is good for most needs. In the northern and northwestern parts of the area the Gosport sand is as shallow as are the Ocala limestone and the undifferentiated Oligocene series limestone, the upper parts of the principal artesian aquifer, farther south.

ROCKS OF JACKSON AGE

In the Savannah area, and wherever present in the Coastal Plain of Georgia and South Carolina, the Jackson represents strata of late Eocene age. The Jackson formation from east Texas to the Tombigbee River in southwest Alabama is equivalent to the Ocala limestone. Eastward in Alabama and in western Georgia the deposits of Jackson age are represented by the Ocala limestone. Farther east in Georgia and in western South Carolina they are represented by the Barnwell formation in surface exposures; in easternmost Georgia and in South Carolina (Savannah area) they are represented by the Ocala limestone only in the subsurface.

OCALA LIMESTONE

The Ocala limestone is one of a number of water-bearing limestones which collectively constitute the principal artesian aquifer of the Coastal Plain in Georgia and part of South Carolina (Warren, 1944a, p. 17). For this report the Ocala is defined as a limestone of late Eocene age overlying the Gosport sand and undifferentiated Claiborne unit of middle Eocene age and unconformably underlying undifferentiated limestone of Oligocene age or in some places, strata of Miocene age.

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A few good exposures of the Ocala limestone occur in the main valleys of the Chattahoochee, Flint, and Ocmulgee Rivers. Where beds equivalent to the Ocala are exposed or lie at shallow depths they are called the Barnwell formation in Georgia and the Barnwell sand in South Carolina (Cooke, 1936 and 1943; LaMoreaux, 1946; LeGrand and Fureron, 1956). The Barnwell beds are exposed over large parts of the Coastal Plain and form the area of recharge for its subsurface equivalent—the Ocala limestone.

Character, distribution, and thickness.—The Ocala limestone is divided into a lower unit and an upper unit in the Savannah area. For this report the division of the Ocala is based mostly on hydrologic properties and electric log correlations; the division is not formally related to that used in other areas. (See MacNeil, 1947b.)

The lower part of the Ocala in the Savannah area is predominantly a buff granular calcitized limestone. It is fossiliferous throughout and contains thin layers or stringers of dense, pale-blue limestone and sandy, silty, argillaceous limestone, or marl. It is glauconitic in the lower part and is somewhat similar to and, except for faunal assemblages, often mistaken for the Gosport sand. The lower unit is more widespread and thicker than the upper unit. Except in the northernmost part of the Savannah area where the entire Ocala limestone is absent, the lower part of the Ocala is 170 to 280 feet thick. The average thickness, based on eight well logs, is about 230 feet. In updip subsurface locations the Ocala is represented only by the lower unit. In the fence diagram, plate 2, the Ocala is not differentiated west of well CHA–452 in Chatham County, but it is thought to consist mostly of the lower unit because it resembles it lithologically. In well HAM–30 the Ocala is not present either because of erosion or lack of deposition. The average thickness of the Ocala (lower unit) in outcrops is much less than subsurface occurrences, but the formation is fairly persistent.

The upper unit is thinner and more limited in areal extent than the lower unit. In 7 wells in the Savannah area the upper unit is 80 to 155 feet thick. The average thickness is about 100 feet.

Because of its stratigraphic position and its proximity to a metropolitan area the upper unit has been penetrated more often than the lower unit and more information is available about its lithology.

The upper unit consists of white to gray limestone; it is somewhat calcitized, crystalline, and abundantly fossiliferous. Certain zones in this part of the formation consist almost entirely of bryozoan remains, echinoid spines, sponge spicules, and foraminifers. In contrast, there are thin (1 or 2 ft) zones of very dense limestone consisting of macroshells and fragments which have been cemented

and are apparently somewhat compacted. These dense limestone zones contain numerous solution channels, and although the solid limestone may have a very low permeability, a small solution channel may increase the permeability greatly. (See table 4, well BFT–304, 186–196 ft.) In parts of the area, especially to the south, water-well drillers have reported relatively thick intervals of very hard rock and large cavities. One driller reported that in one well 6 feet of very hard limestone was penetrated, that the drill stem dropped the next 4 feet through a cavity, and that finally another 4 feet of very hard limestone was drilled. Although these conditions are not widespread they do indicate changing geologic conditions which may affect the water supply in the aquifer. In table 3, the two relatively high coefficients of transmissibility (450,000 and 780,000) were obtained as the result of pumping tests in the southern part of the area (Richmond Hill and Fort Stewart). These values were calculated for the entire principal artesian aquifer at those locations. However, it is quite possible that cavernous limestone, with extremely high permeabilities in a small interval, was the cause of the high transmissibilities.

Water-bearing properties.—The Ocala limestone has been known as a source of large supplies of water for many years. The extent of the formation, the amount of yield, and quality of the water are so well known that the Ocala itself has been referred to erroneously as the principal artesian aquifer. In some parts of the Coastal Plain, especially in the southern part of the Savannah and beyond, the Ocala may very well represent the entire principal artesian aquifer. Both the overlying and underlying formations are either altered to a dolomitic limestone or represented by relatively thin water-bearing rocks. The Ocala in Liberty County is thicker than the entire aquifer in some parts of Chatham County.

The quality of water obtained from the Ocala is excellent for most needs. The chemical constituents are within allowable limits although the water is moderately hard (60–120 ppm) and may need some treatment for commercial or industrial purposes. Yields of 2,000 to 3,000 gpm are common from wells utilizing only the Ocala limestone.

OLIGOCENE SERIES

Rocks intermediate in age between the Eocene series below and the Miocene series above have been assigned to the Oligocene series. In the Savannah area the rocks of the Oligocene series are undifferentiated because insufficient evidence exists to attach a formational name to any of the Oligocene deposits.

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ments in the lower part of the Tampa are relatively large as much as 200 gpm may be available to wells from this thin zone.

One drawback to the sole use of the Tampa as an aquifer is the noticeably high content of hydrogen sulfide (H_2S), which imparts the odor of rotten eggs to the water. Numerous wells on Hilton Head Island draw water from the Tampa limestone and the underlying Oligocene strata. In the shallow wells, with only 3 or 4 lengths of casing (63 to 84 ft), there is a noticeable odor of hydrogen sulfide. A few wells with casing set deeper have less hydrogen sulfide. The hydrogen sulfide appears to be confined to the upper part of the Tampa which is a silty limestone or marl and probably has a low permeability. The origin of the hydrogen sulfide in the water is not known, but the low permeability of the rock probably prevented the water with the hydrogen sulfide gas from being completely flushed out of the formation.

Many domestic wells in the Savannah area yield water from the Tampa limestone and the amount of water obtained is sufficient for most needs.

The low permeability of the upper, thicker part of Tampa limestone indicates that it may actually be part of the upper confining layer. This is especially true in locations where the dominant lithology consists of large amounts of silt and clay and is similar to the Hawthorn.

HAWTHORN FORMATION

In Georgia the name Hawthorn formation is applied to a widespread formation of diverse lithology. The formation is exposed in the northwestern Savannah area along the Savannah River in the bluffs on the Georgia side from north of Hudsons Ferry, Screven County to Ebenezer Landing, Effingham County. Cooke (1936, p. 105–114 and 1943, p. 91–95) described many of the more significant exposures along the Savannah River and at other places in South Carolina and Georgia. In other parts of the area it is found in the subsurface.

In the Savannah area the Hawthorn formation lies conformably on the Tampa limestone. In some places it may merge with and be contemporeanous with the Tampa limestone. Elsewhere it overlies the Tampa and lies unconformably on rocks of Oligocene and late Eocene age. The Duplin marl of Miocene age, where present in the Savannah area, unconformably overlies the Hawthorn. Elsewhere the Hawthorn is unconformably overlain by sediments of Pleistocene and Recent age.

Character, distribution, and thickness.—The Hawthorn formation consists of many different lithologies, none of which are characteristic of the formation as a whole. The most obvious lithology in the

subsurface in the Savannah area is the thick section of green silt and clay.

The thickest sequence of Hawthorn formation was recorded from the well TAT–11 west of Reidsville, Tattnall County, Ga. In this well 420 feet (35–455 ft) of yellowish-green sandy, silty clay was observed. The clay was interbedded with tongues of gray phosphatic sand, white to pink saccharoidal sand, and white dense sandy limestone.

Near Brooklet in Bulloch County, Ga., the Hawthorn is mostly fine- to coarse-grained sand with green silt and clay. Lenses and tongues of sandy limestone and streaks of dolomitic limestone are also present. The eastern facies of the Hawthorn becomes more silty, retaining the green color with many sequences of blocky sandy clay and tongues of dolomitic limestone. The formation is more calcareous from south to north.

In South Carolina the Hawthorn generally is less than 100 feet thick and in well HAM–30 it is absent. Post-Hawthorn seas, moving inland from the east, eroded the Hawthorn, making it thinner in the eastern part of the Savannah area.

Water-bearing properties.—The water-bearing properties of the Hawthorn formation cannot be summarized simply. The water generally is safe to use and hundreds of wells draw water from this formation, although the yields are small because of low permeabilities and poor recharge. However in certain locations thick sand zones are screened and developed to yield moderately large volumes of water. Elsewhere thick lenses or tongues of limestone yield water to open-casing wells.

The quality of the water varies locally; the most noticeable property of the water from the formation is the odor of hydrogen sulfide gas.

The Hawthorn is important as part of the upper confining layer. Its thickness and low permeability help to prevent the leakage of water from the surface into the principal artesian aquifer. Near the coast, changes in regional dip bring the aquifer close to the surface, and tidal currents have scoured deep holes into the Hawthorn in some of the estuaries. The thickness of the confining layer has been reduced and salt and brackish water probably leak through the Hawthorn into the principal artesian aquifer. Before the piezometric head was lowered to below sea level, artesian ground water probably discharged as submarine springs into the estuaries through the thin spots. Now a reverse effect is occurring—these same openings or thinly covered parts of the formation are points of recharge for salt and brackish water.

The Duplin ma
Hawthorn formati
well HAM–30, a
Tampa limestone.
ments of Pliocene

Character, distr
of tan to light-br
Duplin marl in t
Veatch and Steph
and less sandy in t

The Duplin ma
exposures in Sout
where it is exposed
subsurface of the
in well cuttings fr
River.

Water-bearing p
reportedly hard w
amount of finely d
only municipal we
Sumter County, S.
the area, the Dupl
confining layer of
aquifer.

The presence of
tionable. Althougl
formation in the C
in the Savannah a
the evidence is far
precludes a definite
cene age have been
on the fence diagra

In the Savannah
definitely only in t
between the green
red and yellow sand
at the base of the Y
of both late Miocen
boundary of the Y
the subsurface, esp

REF. 10
page 1 of 4

R-70

"Rite in the Rain"
WEATHERPROOF

LEVEL

NOTEBOOK NO. 311

FY-9803-52

Jordan Sign Co Inc.

Savannah, Georgia

Site Reconnaissance

Steve Walker and John McKeown

F-4.743

a product of

J. L. DARLING CORPORATION

TACOMA, WASHINGTON 98421 U.S.A.

REF. 10
page 2 of 4

R-71

LOGBOOK REQUIREMENTS
REVISED - JANUARY 6, 1988

NOTE: ALL LANGUAGE SHOULD BE FACTUAL AND OBJECTIVE

1. Record on front cover of the Logbook:

   TDD No., Site Name, Site Location, Project Manager
2. All entries are made using ink.
3. Provide statement referencing Equipment Location Log.
4. Statement of Work Plan, Study Plan, and Safety Plan discussion and distribution to field team with team member signatures.
5. Sign and date each page. Project Manager is to review and sign off on each logbook daily.
6. A single line is drawn through error. Each correction is dated/initialed.
7. Report weather conditions. Provide general site description and remarks.
8. Document all changes from project planning documents.
9. Provide a site sketch with sample locations.
10. Document all calibration and pre-operational checks of equipment.
11. Provide reference to Sampling Field Sheets for detailed sampling informaiton.
12. Maintain photo log by completing the stamped information at the end of the logbook.
13. If no site representative is on hand to accept the receipt for samples an entry to that effect must be placed in the logbook.

24 Mar [illegible]

1[illegible]30 Met with Clifford K[illegible] + Keith G[illegible] (EPD in Brunswick GA.) about site locations in Savannah area. Mr K[illegible] has 20 years experience with EPD and stated that he seriously doubted that we would find any private potable wells in the Savannah area. Keith G[illegible] gave us a copy of a map with Chatham County wells located on it.

[illegible] 3/24/88 correct entry made on 24 March [illegible]

1530 Drove past site

visit to [illegible] Residence:
C.B. Davis
1903 Hawthorne
Savannah, Ga.

Corner of Hawthorne + Goebel [illegible] 3/24/88

000001

REF. 10
page 3 of 4 #1

R-72

FIT visited briefly 3/28/88 with Mr. Harry [illegible] at the Savannah Industrial & Development Water Dept, which supplies almost all of the industries along the Sav. River. He provided us with info. on the I&D water sys. and the Sav. municipal sys. We then proceeded to Port Wentworth where Mr. Tommy Thomas supplied us with info. on the Pt. Wentworth sys.

City Water Superintendent

FIT then proceeded to Garden City where we Mr. Roy Lynn provided us w/ info. on that water system. I&D water originates from Mouth of Abercorn Cr. (Abercorn Cr.)

1545 Pennsylvania Ave School is closest School

Closest park is just east of Penn. Ave School - it is Sav. Gardens Park

[signature]

000002

3/28/88

E. Side Church of the Nazarene is Closest Church.

3/31/88

Drove by Jordan Sign Co. and photographed area to the left of it on [illegible] road. Company called I&D Chemicals [illegible] next door to Jordan Sign at the area FIT photographed.

000003

Harry Tee
2354250
Water Dept
233-4029
Harry Tee
Water Dept

REF. 10
page 4 of 4

3/31/88

1020 hrs met briefly w/ Chatham County Ag Extension Agent, Mr. Bill Myers. He stated that there's almost no agriculture in Chatham County anymore due to high land values (& subsequent high property taxes).

When presented with our 3 topo maps (Sav., Coord. City & Pt. Wentworth Quads), he took a moment to look over the maps and stated that he knew of no food crop-land greater than 5 acres in size in the area shown by our maps.

000004

000005

R-73

CELA

HAZARDOUS WASTE ANALYSIS REQUEST

DATE: AUG 26 87 PROJECT: Jordan Sign Company COLLECTOR: KNOWLES / EVANS

NO. SAMPLES: 2 (ONE) 4 LOG NOS. 3064 & 3065 LIQUID 2 SOLID ____ SOIL 2

CAUSTIC ____ ACID ____ SOLVENT ____ UNKNOWN X SLUDGE ____

disposed

INFORMATION FOUND: Little detailed information is available regarding this site. All that is known, is that the site was used as a disposal area for local industries. Resin wastes were disposed of at this site by Hercules.

HAZARDOUS WASTE NOS. ____

HAZARDOUS HANDLING: ____

WORK PRIORITY (CRITICAL NEED) Medium

METALS ANALYSES

	TOT	DIS			
METALS (DW NO Hg)	☑	☐	EP METALS (DW NO Hg) ☐	100X ☐	30X ☐
METALS (DW WITH Hg)	☐	☐	EP METALS (DW WITH Hg)		

	TOT	DIS		TOT	DIS				
NICKEL	☑	☐	CADMIUM	☐	☐	EP NICKEL	☐	EP CADMIUM	☐
ARSENIC	☐	☐	LEAD	☐	☐	EP ARSENIC	☐	EP LEAD	☐
CHROMIUM	☐	☐	MERCURY	☐	☐	EP CHROMIUM	☐	EP MERCURY	☐
CHROM-HEX	☐	☐	SELENIUM	☐	☐	EP CHROM-HEX	☐	EP SELENIUM	☐
____	☐	☐	____	☐	☐	____	☐	____	☐

SPECIFIC ANALYSES

pH	☐	SULFIDE	☐	% SOLIDS	☐ ____ ☐
FLASH PT	☐	SP. COND.	☐	TOT. PHENOLS	☐ ____ ☐
CYANIDE TOT.	☐	TOC	☐	CHLORIDE	☐ ____ ☐
CYANIDE AM.	☐	TOH	☐	FLUORIDE	☐ ____ ☐

ORGANIC ANALYSES

PESTICIDE SCREEN (EC)	☐	GC-MS ACID EXTRACTABLES	☐
PCB	☐	GC-MS BASE/NEUTRALS	☐
VOLATILE ORGANICS (VOA)	☑		

SPECIFIC ORGANICS: ____

APPROVED: Martin N. Stubblefield AUTHORIZED: Randolph D. Williams

HW00097

C-1

GEORGIA ENVIRONMENTAL PROTECTION DIVISION

LABORATORY REPORT

656-7404

SA
DATE: 8/25/88 PROJECT: JORDAN SIGN COMPANY COLLECTOR: C. EVANS

	HW LOG NO.	3064	3065			
DATE REC'D	26-Aug-1988	LABEL	JSGW-1	JSGW-2		
TIME REC'D	10:36		GROUND-WATER	GROUND-WATER		
REC'D BY:	M. Basmajian					
DEL BY:	Evans					
	J Harold Lunsford LABORATORY MANAGER					
DATE:	10-18-88					
PARAMETERS	LAB NO.	HW 3064	HW 3065			
Total Ag	ug/L	<50	<100			
As	"	<40	27000			
Ba	"	<10	1100			
Cd	"	<10	720			
Cr	"	<10	1700			
Ni	"	<20	540			
Pb	"	<25	32000			
Se	"	<100	<100			
NOA -		See Attached Sheets				

EMARKS:

C-2

DATE 7-7-88 GEORGIA ENVIRONMENTAL PROTECTION DIVISION SAMPLE REC'D (date & time): _____

PROJECT: Jordan Sign Co PURGEABLE ORGANIC ANALYSIS-WATER SAMPLE START (date & time): _____

SOURCE: JSGW-1 DATA REPORTING SHEET SAMPLE STOP (date & time): _____

Groundwater

SAMPLE TYPE: Water CHEMIST: MB COMPLETE: DOC

SAMPLE NO.: HW 3064

Compound	Storet#		Units	Compound	Storet#		Units
Methylene Chloride	34423	<5	µg/l	Acetone		<10	µg/l
Trichlorofluoromethane	34488	<1	µg/l	Methyl Ethyl Ketone		<10	µg/l
1,1-Dichloroethylene	34501		µg/l	Carbon Disulfide		<1	µg/l
1,1-Dichloroethane	34496		µg/l	Isopropyl Acetate			µg/l
1,2-Trans-Dichloro-ethylene	34546		µg/l	2-Hexanone			µg/l
				Methyl Isobutyl Ketone			µg/l
Chloroform	32106		µg/l	Styrene			µg/l
1,2-Dichloroethane	32103		µg/l	O-Xylene			µg/l
1,1,1-Trichloroethane	34506		µg/l	P-Xylene			µg/l
Carbon Tetrachloride	32102		µg/l	M-Xylene			µg/l
Dichlorobromomethane	32101		µg/l	Ethyl Acetate			µg/l
1,2-Dichloropropane	34541		µg/l	n-Propyl Acetate			µg/l
Trans-1,3-Dichloro-propene	34699		µg/l	Butyl Acetate			µg/l
				Acrolein	34210	<50	µg/l
Trichloroethylene	39180		µg/l	Acrylonitrile	34215	<50	µg/l
Benzene	34030		µg/l	Chloromethane	34418	<10	µg/l
Chlorodibromomethane	34306		µg/l	Bromomethane	34413		µg/l
1,1,2-Trichloroethane	34511		µg/l	Vinyl Chloride	39175		µg/l
Cis-1,3-Dichloropropene	34704		µg/l	Chloroethane	34311		µg/l
2-Chloroethyl Vinyl Ether	34576						µg/l
							µg/l
Bromoform	32104		µg/l				µg/l
1,1,2,2-Tetrachloro-ethane	34516		µg/l				µg/l
							µg/l
Tetrachloroethylene	34475		µg/l				µg/l
Toluene	34010		µg/l				µg/l
Chlorobenzene	34301		µg/l				µg/l
Ethylbenzene	34371		µg/l				µg/l

U - ANALYZED FOR BUT NOT DETECTED (value reported is detection limit - D.L.)

M - NOT ANALYZED

No other purgeable organic compound detected with an estimated minimum detection limit of _____

DATE: 7-7-84 GEORGIA ENVIRONMENTAL PROTE ON DIVISION SAMPLE REC'D (date & time)
PROJL : Jordan Sign Co PURGEABLE ORGANIC ANALYSIS-WATER SAMPLE START (date & time):
SOURCE: JSGW-2 DATA REPORTING SHEET SAMPLE STOP (date & time):
Groundwater
SAMPLE TYPE: Water CHEMIST: MB COMPLETE: DK
SAMPLE NO.: HW 3065

Compound	Storet#		Units	Compound	Storet#		Units
Methylene Chloride	34423	< 5	µg/l	Acetone		< 10	µg/l
Trichlorofluoromethane	34488	< 1	µg/l	Methyl Ethyl Ketone		< 10	µg/l
1,1-Dichloroethylene	34501		µg/l	Carbon Disulfide		< 1	µg/l
1,1-Dichloroethane	34496		µg/l	Isopropyl Acetate			µg/l
1,2-Trans-Dichloro-ethylene	34546		µg/l	2-Hexanone			
				Methyl Isobutyl Ketone			µg/l
Chloroform	32106		µg/l	Styrene			µg/l
1,2-Dichloroethane	32103		µg/l	O-Xylene			µg/l
1,1,1-Trichloroethane	34506		µg/l	P-Xylene			µg/l
Carbon Tetrachloride	32102		µg/l	M-Xylene			µg/l
Dichlorobromomethane	32101		µg/l	Ethyl Acetate			µg/l
1,2-Dichloropropane	34541		µg/l	n-Propyl Acetate			µg/l
Trans-1,3-Dichloro-propene	34699		µg/l	Butyl Acetate			µg/l
				Acrolein	34210	< 50	µg/l
Trichloroethylene	39180		µg/l	Acrylonitrile	34215	< 50	µg/l
Benzene	34030		µg/l	Chloromethane	34418	< 10	µg/l
Chlorodibromomethane	34306		µg/l	Bromomethane	34413		µg/l
1,1,2-Trichloroethane	34511		µg/l	Vinyl Chloride	39175		µg/l
Cis-1,3-Dichloropropene	34704		µg/l	Chloroethane	34311		µg/l
2-Chloroethyl Vinyl Ether	34576						µg/l
							µg/l
Bromoform	32104		µg/l				µg/l
1,1,2,2-Tetrachloro-ethane	34516		µg/l				µg/l
							µg/l
Tetrachloroethylene	34475		µg/l				µg/l
Toluene	34010		µg/l				µg/l
Chlorobenzene	34301		µg/l				µg/l
Ethylbenzene	34371		µg/l				µg/l

U - ANALYZED FOR BUT NOT DETECTED (value reported is detection limit - D.L.)

M - NOT ANALYZED

No other purgeable organic compound detected with an estimated minimum detection limit of _____

CERCLA

HAZARDOUS WASTE ANALYSIS REQUEST

REF. 11
page 1 of 4

DATE: AUG 26 87 PROJECT: Jordan Sign Company COLLECTOR: KNOWLES / EVANS

NO. SAMPLES: 2 (PE 4) LOC NOS. 3064 & 3065 LIQUID 2 SOLID _____ SOIL 2

CAUSTIC _____ ACID _____ SOLVENT _____ UNKNOWN X SLUDGE _____

DISPOSED

INFORMATION FOUND: Little detailed information is available regarding this site. All that is known, is that the site was used as a disposal area for local industries. Resin wastes were disposed of at this site by Hercules.

HAZARDOUS WASTE NOS. _____

HAZARDOUS HANDLING: _____

WORK PRIORITY (CRITICAL NEED) Medium

METALS ANALYSES

	TOT	DIS				
METALS (IW NO Hg)	☑	☐	EP METALS (IW NO Hg)	☐	100X ☐	3CX ☐
METALS (IW WITH Hg)	☐	☐	EP METALS (IW WITH Hg)			

	TOT	DIS		TOT	DIS				
NICKEL	☑	☐	CADMIUM	☐	☐	EP NICKEL	☐	EP CADMIUM	☐
ARSENIC	☐	☐	LEAD	☐	☐	EP ARSENIC	☐	EP LEAD	☐
CHROMIUM	☐	☐	MERCURY	☐	☐	EP CHROMIUM	☐	EP MERCURY	☐
CHROM-HEX	☐	☐	SELENIUM	☐	☐	EP CHROM-HEX	☐	EP SELENIUM	☐
_____	☐	☐	_____	☐	☐	_____	☐	_____	☐

SPECIFIC ANALYSES

pH	☐	SULFIDE	☐	% SOLIDS	☐ _____ ☐
FLASH PT	☐	SP.COND.	☐	TOT. PHENOLS	☐ _____ ☐
CYANIDE TOT.	☐	TOC	☐	CHLORIDE	☐ _____ ☐
CYANIDE AM.	☐	TOH	☐	FLUORIDE	☐ _____ ☐

ORGANIC ANALYSES

PESTICIDE SCREEN (EC)	☐	GC-MS ACID EXTRACTABLES	☐
PCB	☐	GC-MS BASE/NEUTRALS	☐
VOLATILE ORGANICS (VOA)	☑		

SPECIFIC ORGANICS: _____

APPROVED: Martin N. Gottlieb AUTHORIZED: Randolph D. Wilson

R-74

GEORGIA ENVIRONMENTAL PROTECTION DIVISION
LABORATORY REPORT

656-7404

SA
DATE: 8/25/88 PROJECT: JORDAN SIGN COMPANY COLLECTOR: C. EVANS

	HW LOG NO.	3064	3065			
DATE REC'D	26-Aug-1988	LABEL	JSGW-1	JSGW-2		
TIME REC'D	10:36		GROUND-WATER	GROUND-WATER		
REC'D BY:	M. BASMAJIAN					
DEL BY:	EVANS					
	J Harold Langford LABORATORY MANAGER					
DATE:	10-18-88					
PARAMETERS	LAB NO.		HW 3064	HW 3065		
Total Ag	ug/L		<50	<100		
As	"		<40	27000		
Ba	"		<10	1100		
Cd	"		<10	720		
Cr	"		<10	1700		
Ni	"		<20	540		
Pb	"		<25	32000		
Se	"		<100	<100		
VOA -			See Attached Sheets			

REMARKS:

DATE 7-7-88

PROJECT: Jordan Sign Co.

SOURCE: JSGW-1
Groundwater

GEORGIA ENVIRONMENTAL PROTE ON DIVISION
PURGEABLE ORGANIC ANALYSIS-WATER
DATA REPORTING SHEET

SAMPLE TYPE: Water

SAMPLE NO.: HW 3064

SAMPLE REC'D (date & time

SAMPLE START (date & time):

SAMPLE STOP (date & time):

CHEMIST: MB COMPLETE: DOL

Compound	Storet#		Units
Methylene Chloride	34423	<5	µg/l
Trichlorofluoromethane	34488	<1	µg/l
1,1-Dichloroethylene	34501		µg/l
1,1-Dichloroethane	34496		µg/l
1,2-Trans-Dichloro-ethylene	34546		µg/l
Chloroform	32106		µg/l
1,2-Dichloroethane	32103		µg/l
1,1,1-Trichloroethane	34506		µg/l
Carbon Tetrachloride	32102		µg/l
Dichlorobromomethane	32101		µg/l
1,2-Dichloropropane	34541		µg/l
Trans-1,3-Dichloro-propene	34699		µg/l
Trichloroethylene	39180		µg/l
Benzene	34030		µg/l
Chlorodibromomethane	34306		µg/l
1,1,2-Trichloroethane	34511		µg/l
Cis-1,3-Dichloropropene	34704		µg/l
2-Chloroethyl Vinyl Ether	34576		
Bromoform	32104		µg/l
1,1,2,2-Tetrachloro-ethane	34516		µg/l
Tetrachloroethylene	34475		µg/l
Toluene	34010		µg/l
Chlorobenzene	34301		µg/l
Ethylbenzene	34371		µg/l

Compound	Storet#		Units
Acetone		<10	µg/l
Methyl Ethyl Ketone		<10	µg/l
Carbon Disulfide		<1	µg/l
Isopropyl Acetate			µg/l
2-Hexanone			µg/l
Methyl Isobutyl Ketone			µg/l
Styrene			µg/l
O-Xylene			µg/l
P-Xylene			µg/l
M-Xylene			µg/l
Ethyl Acetate			µg/l
n-Propyl Acetate			µg/l
Butyl Acetate			µg/l
Acrolein	34210	<50	µg/l
Acrylonitrile	34215	<50	µg/l
Chloromethane	34418	<10	µg/l
Bromomethane	34413		µg/l
Vinyl Chloride	39175		µg/l
Chloroethane	34311		µg/l

U - ANALYZED FOR BUT NOT DETECTED (value reported is detection limit - D.L.)

M - NOT ANALYZED

No other purgeable organic compound detected with an estimated minimum detection limit of _____

REF. 11
page 3 of 4

R-76

DATE: 7-7-84

PROJECT: Jordan Sign Co

SOURCE: TSGW-2 Groundwater

GEORGIA ENVIRONMENTAL PROTECTION DIVISION
PURGEABLE ORGANIC ANALYSIS-WATER
DATA REPORTING SHEET

SAMPLE REC'D (date & time)
SAMPLE START (date & time):
SAMPLE STOP (date & time):

SAMPLE TYPE: Water
SAMPLE NO.: HW 3065

CHEMIST: MØ COMPLETE: JMC

Compound	Storet#		Units	Compound	Storet#		Units
Methylene Chloride	34423	<5	µg/l	Acetone		<10	µg/l
Trichlorofluoromethane	34488	<1	µg/l	Methyl Ethyl Ketone		<10	µg/l
1,1-Dichloroethylene	34501		µg/l	Carbon Disulfide		<1	µg/l
1,1-Dichloroethane	34496		µg/l	Isopropyl Acetate			µg/l
1,2-Trans-Dichloro-ethylene	34546		µg/l	2-Hexanone			
				Methyl Isobutyl Ketone			µg/l
Chloroform	32106		µg/l	Styrene			µg/l
1,2-Dichloroethane	32103		µg/l	O-Xylene			µg/l
1,1,1-Trichloroethane	34506		µg/l	P-Xylene			µg/l
Carbon Tetrachloride	32102		µg/l	M-Xylene			µg/l
Dichlorobromomethane	32101		µg/l	Ethyl Acetate			µg/l
1,2-Dichloropropane	34541		µg/l	n-Propyl Acetate			µg/l
Trans-1,3-Dichloro-propene	34699		µg/l	Butyl Acetate			µg/l
				Acrolein	34210	<50	µg/l
Trichloroethylene	39180		µg/l	Acrylonitrile	34215	<50	µg/l
Benzene	34030		µg/l	Chloromethane	34418	<10	µg/l
Chlorodibromomethane	34306		µg/l	Bromomethane	34413		µg/l
1,1,2-Trichloroethane	34511		µg/l	Vinyl Chloride	39175		µg/l
Cis-1,3-Dichloropropene	34704		µg/l	Chloroethane	34311		µg/l
2-Chloroethyl Vinyl Ether	34576						µg/l
							µg/l
Bromoform	32104		µg/l				µg/l
1,1,2,2-Tetrachloro-ethane	34516		µg/l				µg/l
							µg/l
Tetrachloroethylene	34475		µg/l				µg/l
Toluene	34010		µg/l				µg/l
Chlorobenzene	34301		µg/l				µg/l
Ethylbenzene	34371		µg/l				µg/l

U - ANALYZED FOR BUT NOT DETECTED (value reported is detection limit - D.L.)

M - NOT ANALYZED

No other purgeable organic compound detected with an estimated minimum detection limit of _____

REF. 11
page 4 of 4

R-77